

THOMSON'S
CONSPECTUS



TIRARD

SL/26-4-2-30 615.11(42)

COLL. REG. MED. LOND.
MDXVIII



Printed by J. G. Smith, 14, St. Paul's Churchyard, London.



CONSPECTUS

ADAPTED TO THE

BRITISH PHARMACOPŒIA

PRINTED BY
SPOTTISWOODE AND CO., NEW-STREET SQUARE
LONDON

Anthony Todd

THOMSON'S CONSPECTUS

ADAPTED TO THE

BRITISH PHARMACOPŒIA OF 1885

EDITED BY

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NEW EDITION

WITH AN APPENDIX CONTAINING NOTICES OF SOME
OF THE MORE IMPORTANT NON-OFFICIAL
MEDICINES AND PREPARATIONS

LONDON

LONGMANS, GREEN, AND CO.

1887

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PREFACE.

LITTLE or no apology appears to be due for the reappearance of this unpretending work. Its merits have been generally acknowledged and its place not otherwise occupied. The plan of the work has been preserved, and the Editor has endeavoured to bring the book into accordance with the British Pharmacopœia of 1885, and has made such other corrections and alterations as were found necessary from the progress of science. The writings of the best authors have been consulted, but as no credit is claimed beyond what is due to a careful and accurate compilation, any special reference to their labours, and to the uses which have been made of them, would be out of place in a book of this size.

To make up for the shortness of the descriptions in the body of the work, a more general account of each of the classes of substances employed is given in the Introduction. In the Appendix the section relating to unofficial drugs of recent introduction or employed on the Continent or in the United States has been entirely re-written. The section on poisons has been very much condensed;

and to facilitate the art of prescription to the student, a few of the more common formulæ employed in various London hospitals are introduced by way of example.

The Editor, in conclusion, can only express a hope that this work may still continue to hold the same position it has hitherto enjoyed in public estimation.

28 WEYMOUTH STREET, W.

December 1886.

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INTRODUCTION.

IN THE PRESENT EDITION of the British Pharmacopœia, the Materia Medica and the preparations and compounds have been arranged together in alphabetical order in the body of the work. The Appendix of the Pharmacopœia is divided into three sections—I. Articles used in chemical analysis; II. Test solutions for qualitative analysis; III. Test solutions for volumetric analysis.

To save repetition, and to facilitate study, we propose to give a general view of the peculiarities of each of the principal groups of Medicine, by way of introduction to the particular notices of the individual articles contained in the Pharmacopœia.

ACIDS.

Most of the Acids employed in Pharmacy are characterised by the following properties. They have a sour or acid taste, they change the colour of blue litmus paper to red, and similarly act on all blue and purple vegetable colours; they form neutral compounds with alkalis and earths, in which the original properties of both components are lost, or considerably modified; and they unite with metallic oxides, constituting a class of salts.

The names of acids formed from the same elements generally vary in their terminations according to the relative proportion of oxygen they contain in chemical combination. Thus when sulphur is united with its full proportion of oxygen, the acid is named *sulphuric*; when with a smaller portion, *sulphurous*; the terminations *ic* and *ous* marking the degrees of saturation. Chlorine and phosphorus combine with substances in different proportions, giving rise to *subchlorides*, *perchlorides*, *hypochlorites*, *chlorites*, *chlorates*, and *perchlorates*, or *hypophosphites*, and *phosphates*. The first two classes contain no oxygen, in the others the relative proportion of oxygen increases in the order given.

The stronger acids should be kept in well-stopped glass bottles, and the name of the acid each bottle contains engraved on the glass. They should also be dispensed in glass-stopped phials; for cork blackens sulphuric acid, and it is dissolved by nitric and by hydrochloric acid.

Sulphuric acid is sometimes adulterated with sulphate of potassium, which may be detected by saturating the acid with ammonia, and exposing it in a crucible to a red heat, so as to expel the sulphate of ammonium; the sulphate of potassium, when present, will remain in the crucible. It also frequently contains sulphate of lead from the leaden chambers in which it is prepared; this is detected by a white precipitate on the addition of an equal volume of water. Arsenic, hydrochloric acid, and nitrous acid are also occasionally present as impurities.

Nitric acid is sometimes adulterated with *sulphuric* and *hydrochloric* acids. The first is discovered by dropping into the diluted nitric acid a solution of nitrate of barium, which is precipitated white if sulphuric acid be present; and the presence of hydrochloric acid may be detected by the precipitation of the white chloride of silver on the addition of a solution of nitrate of silver. In the same manner *sulphuric* acid is detected in *acetic* acid by dropping into it a solution of chloride of barium; copper by the acid becoming bluish when supersaturated with ammonia, or the ferrocyanide of potassium throwing down a copper-coloured precipitate; and lead by a black precipitate being thrown down when sulphuretted hydrogen gas is added to it.

Acids when in the concentrated form have irritant or caustic properties; hence, when intended for internal administration, they require free dilution. In the Pharmacopœia directions are given for the preparation of *diluted acids*, most of which are intended to have the same neutralising power, when measured by the amount of an alkaline solution which they are capable of neutralising. *Aromatic sulphuric acid* is somewhat weaker than the ordinary diluted acids; *diluted acetic acid* is of the strength of vinegar.

ALKALIS AND THEIR SALTS.

Two of the mineral ALKALIS employed in Pharmacy are compounds of *oxygen* with *metallic bases*; *ammonia* is a compound of *hydrogen* and *nitrogen* in aqueous solution. They possess properties the reverse of the acids. Their taste is acid; they change red litmus paper to blue, and deepen or change vegetable red colours; they also change the yellow colouring matter of turmeric to reddish-brown; they are caustic, or inflame and corrode the skin, and dissolve animal matter; they have a

strong affinity for water, and by their greater solubility in it are distinguished from the earths; they unite with oils and fat, forming soap; and form neutral salts with the acids. There are three alkalis: one is volatile, and cannot be obtained perfectly pure in a solid form; the other two are fixed. They should be kept in well-stopped glass bottles, and dispensed with glass-stopped phials.

The strength of the alkalis may be determined by the use of the volumetric solution of oxalic acid, a thousand grain-measures of which contain half an equivalent in grains (63 grains) of oxalic acid, and are therefore capable of neutralising an equivalent in grains of any alkali or alkaline bicarbonate.

Ammonia, the volatile alkali, is often over-diluted with water, which may be known by the spec. grav. of the fluid: one fluid drachm of the strong solution of ammonia ought to contain 15.83 grains of ammonia (NH_3). *Liquor potassæ* often contains lime, which is known by the solution, diluted with distilled water, becoming milky when the breath is blown through it, or on a solution of carbonate of potassium being added to it; the lime being thus formed into a carbonate. The purity of *potassa caustica* or of *soda caustica* in the solid form is of little consequence, as they are used for external application only.

The *Alkaloids*, or alkalis found in the barks, the leaves, and the seeds of some plants, are in most cases compounds of carbon, oxygen, hydrogen, and nitrogen. They possess many of the chemical properties of the mineral alkalis.

Some ALKALINE SALTS combine with two proportions of acid. When the acid is in excess, *bi* or *bin* is added to the appellation of the salt, as *bicarbonate of potassium*. They require for their solution various proportions of water, from one-half to 2,000 times the weight of the salt. When they attract moisture they are said to be *deliquescent*; when they lose their water of crystallisation, become opaque, dry, and easily fall to powder, *efflorescent*; if, when exposed to heat, they gradually dry to a mass, they are said to undergo the *watery fusion*; and to *decrepitate*, if they split, fly, and crackle, when exposed to a high temperature.

The salts most commonly adulterated are *potassii carbonas* and *sodii carbonas*. To try the first, make a solution of one part of the salt in eight of distilled water. If a white precipitate be thrown down in the neutralised solution by chloride of barium or acetate of lead, *sulphuric salts* are indicated; and *hydrochloric salts* by a white precipitate being formed with nitrate of silver. If a white precipitate be produced by a solution of oxalate of potassium, *lime*, or its *carbonates*, are present. The same tests show the presence of similar substances in *carbonate of sodium*, if added to a saturated solution of it in nitric acid. The

addition of *tartaric acid* discovers the presence of potassium by forming a precipitate of bitartrate.

The deliquescent and efflorescent salts should be kept and dispensed in stopped bottles; while those that are persistent will not suffer from being put up in paper.

CATAPLASMS.

These are extemporaneous preparations, and have a place in the Pharmacopœia merely to fix the proportions of the ingredients.

CONFECTIONS.

These preparations consist of vegetable matters, beaten, when recent, into a uniform pulpy mass, with sugar; and of vegetable and light earthy powders mixed with syrup and honey. They form a class of preparations of no great activity, when compared with the other forms in which the same remedies may be given; but some vegetable matters can be thus preserved better than by drying; and they are useful as vehicles, and for giving form to more active medicines. They should be kept in closely covered jars, to preserve their proper consistence and moisture.

DECOCTIONS.

These are aqueous solutions of the active principles of vegetables obtained by boiling. The directions of the Pharmacopœia, particularly as to the time of boiling, should be strictly attended to; for although the solvent power of the water is increased by boiling, yet the notion that long boiling renders the preparation more active is erroneous. Vegetables containing volatile principles and extractive matter cannot, with strict propriety, be subjected to decoction, as the first are dissipated by the boiling, and the second attracts oxygen with so much avidity at a temperature of 212° F. (100° C.), that it is converted into an *insipid inert matter*, which is no longer soluble, and is precipitated in the decoction. This is the case with *cinchona* and some other vegetable matters, which are still, nevertheless, ordered to be prepared by decoction. When they are so prepared the vessels should be very tightly closed. Vegetables, also, which contain tannic acid and starch, should not be made into decoctions, because a tannate is formed which is insoluble in cold water, and is inert.

Decoctions should not be kept longer than twenty-four hours in warm weather, as they very soon ferment, become ropy, and spoil.

DISCS (LAMELLÆ).

Small discs of gelatine, with some glycerine, containing a minute proportion of active ingredients to be employed in ophthalmic operations.

DISTILLED WATERS.

The distilled waters are prepared by distillation either from the plants themselves or the volatile oils.

In the distillation of volatile oils the water which comes over during the process contains dissolved in it a portion of the oil, and forms this class of preparations. They should, therefore, have the odour and taste, in a slight degree, of the oil; and if again rectified, which enables them to be kept for two or three years, they should appear nearly as transparent as pure water. They are seldom prepared by the dispensing chemist, but generally in the large way. When they appear ropy and thick, or have a foetid odour, they are unfit for medicinal use. To prevent their spoiling, a small portion of spirit is often added; but the second rectification is a preferable method of preserving them.

Common distilled water is ordered to be used in most pharmaceutical preparations; boiled or filtered water frequently forms inert and insoluble compounds, and does not possess so much solvent power as distilled water.

EARTHS AND THEIR SALTS.

The earths, like the alkalis, are mostly compounds of *oxygen* with *metallic bases*. They are of very difficult fusibility; very sparingly soluble; and unite with the acids, forming neutral salts. Those which are soluble in water possess properties very similar to those of the alkalis; they are caustic; change to green vegetable blues and reds; and, combined with oils, form soap.

Two earths only in their pure state are used in medicine, namely *lime* and *magnesia*. The former, which is chiefly employed in pharmaceutical operations, should be used as soon after it is burnt as possible; and each should be preserved in very closely stopped bottles, as both attract powerfully the carbonic acid contained in atmospheric air. The solution of lime or lime-water should be kept in small bottles perfectly full and well corked; for, by the contact of air, the lime attracts carbonic acid, loses its solubility, and forms a pellicle of carbonate of lime on the surface of the water, till the whole of the lime is abstracted.

The NEUTRAL EARTHY SALTS do not require any particular care or management, except that they ought not to enter into extemporaneous prescriptions with substances which are likely to decompose them, or with those acids with which they form insoluble compounds; as, for example, chalk with sulphuric acid.

EXTRACTS.

These are prepared according to several distinct methods.

1. The *green extracts* prepared from indigenous plants, by evaporating the fresh juice. After the coagulation and removal of the green colouring matter by a moderate heat, the albumen is coagulated by a temperature of 200° F. (93·3° C.) and removed. The colouring matter is then added and the whole evaporated to a proper consistence. The green extracts employed are those of aconite, belladonna, conium, hyoscyamus, and lactuca.

2. By extraction of soluble materials with cold or boiling water, and subsequent evaporation.

3. By extraction of active ingredients by employing rectified or dilute spirit, and subsequent evaporation.

4. By maceration with a considerable quantity of cold water, to remove soluble materials, and by subsequent evaporation and addition of spirit to prevent decomposition. The extracts thus prepared are in the liquid form.

5. By removal of oil or of active matter by means of ether.

6. By the combined extractive action of rectified spirit and ether, or by the solvent action of acetic acid.

The solid extracts are ordered to be kept in a *hard* and in a *soft* state; the consistence of the soft being such as to retain the round form of a pill without the addition of any powder. Both varieties should be preserved in a dry place, to prevent them from becoming mouldy; and the soft should be wrapped in oil bladders, and kept in closely covered pots.

GLYCERINES.

In these glycerine forms the solvent menstruum. Eight are now rendered official in place of the five of the last edition of the Pharmacopœia, and the composition of one has been altered. They are prepared from carbolic, gallic, and tannic acids, alum, borax, subacetate of lead, starch, and tragacanth. The first three contain one part by weight, dissolved in four fluid parts of glycerine. The glycerines of starch and tragacanth are translucent jellies. Glycerine of borax is modified by the addition of water.

GUM RESINS.

These are natural combinations of gum and resin; the former predominating in some, the latter in others. They have generally a strong odour, owing to volatile oil, and a pungent, bitter taste; they are solid, brittle, opaque, almost entirely soluble in diluted alcohol, and form emulsions when triturated with water; but by standing, the resin is deposited, and therefore fluid preparations of gum resins should always be extemporaneous. They soften by a gentle heat, but in a high temperature are decomposed.

The gum resins should be well freed from extraneous matters; and when it is wished to retain them in a soft state for making pills, they must be kept in the mass, wrapped in a bladder, in a well-covered opaque jar; but when they are to be powdered, they should be cut into small pieces and laid in an open drawer, or exposed to the air.

HALOGENS: PREPARATIONS OF IODINE, BROMINE, AND CHLORINE.

All of these substances combine with metals forming *iodides*, *bromides*, and *chlorides*. When the compound consists of one equivalent of each of the components, the addition of *prot*, *proto*, or *sub* is used; as *protiodide*, *protochloride*, *subchloride*, &c.; when it contains two equivalents of the base, the syllable *bin*, *bi*, or *per* is added; thus *biniodide*, *bichloride*, *perchloride*.

The iodide of iron is not official in the solid form: the syrup is the best mode of preserving it.

HONEY, PREPARATIONS OF.

Honey was formerly considered as a medicine of some efficacy, particularly in pectoral affections; but more correct views of these diseases have deservedly thrown it into neglect. It acts on the bowels, but in other respects possesses no advantages over syrup. In the present Pharmacopœia, the only medicine ordered to be prepared with honey is *mel boracis*. It is not apt to spoil, and therefore requires less attention to preserve it than syrups.

INFUSIONS.

The majority of the infusions are ordered to be made with boiling distilled water; but water at 120° F. (48°-90 C.) is ordered in the preparation of the infusions of *chiretta* and *cusparia*, and cold water in those of *calumba* and *quassia*. Water

at 212° F. extracts the gum, sugar, extractive, tannic acid, saline matters, and a portion of the volatile oils, and of the resinous matter of vegetables ; thence infusion, perhaps, is equivalent in the majority of cases to decoction. Cold water also extracts most of the active principles of plants. The infusion made with boiling water, although, perhaps, less grateful, yet contains more active matter. In either case, infusions should be extemporaneous preparations, and therefore the British Pharmacopœia properly directs half a pint only to be made at once. The substances infused should be coarsely powdered only, for when the powder is fine, the infusion never can be rendered perfectly clear.

INHALATIONS (VAPORES).

These, which will be found useful in many affections of the respiratory system, are six in number, and should be prepared as required ; an inhaler is necessary for their proper administration.

JUICES.

Five of these preparations have been introduced into the British Pharmacopœia : viz., succus belladonnæ, succus conii, succus hyoscyami, succus scoparii, succus taraxaci ; these are made by mixing rectified spirit with the expressed juice in the proportion of one of the former to three of the latter.

LOZENGES.

There are twelve lozenges in the present Pharmacopœia. They are made of definite strength, and present a convenient mode of prescribing certain remedies in small doses. The most important addition is that of *santonin*.

METALS AND THEIR SALTS.

Metals have, with a few exceptions, a greater specific gravity than any other class of bodies ; they are dense, opaque, susceptible of a fine polish, tenacious, and are the best conductors of heat. They are more or less fusible, and may be volatilised by heat. In their metallic state they have affinities for each other, and also for oxygen, hydrogen, carbon, sulphur, phosphorus, chlorine, iodine, and bromine ; and when united with oxygen form acids, alkalis, and the earths.

None of the metals, except *iron* and *mercury*, are employed in the simple or uncombined form as remedies in the practice of medicine ; but for pharmaceutical purposes it is of importance to obtain them in as pure a state as possible. Metals, united with

simple substances, form compounds, which are named from the base; for example, *chlorides, sulphides, phosphides, iodides, bromides, oxides.*

METALLIC SALTS are combinations of the oxides of the metals with acids, or are formed by the metal replacing the hydrogen of acids.

Metals combine with various proportions of oxygen, which are occasionally for convenience denoted and expressed by the colour of the oxides, as *yellow oxide of mercury, red oxide of mercury, &c.* Oxides have not the lustre, opacity, tenacity, or specific gravity of the metals; they are uninflammable, generally insipid, nearly insoluble in water, and have an earthy appearance. They require to be kept in stopped bottles, as some of them are reduced by moisture.

The *metallic salts*, which, properly speaking, are oxides combined with the radical of the acids, are of a saline nature, generally soluble in water, and crystallisable. They are named from the acid, and the metal with the oxide of which it is combined, as *sulphate of iron, nitrate of silver, &c.* The active properties of metallic salts vary much, according to the degree of previous oxidation of the metals they contain; thus the same acid, united with an imperfect oxide, will form an insipid, insoluble compound; while with a more perfect oxide, the compound will be acrid, and soluble in water.

Many of the metallic salts effloresce, and attract oxygen from the atmosphere; others are altered in their properties by moisture, and some of them are decomposed by the action of light; hence, perhaps, it ought to be a general rule to keep all of them in well-stopped bottles made of green glass, or otherwise rendered opaque. In forming those which are soluble into lotions, *distilled water* should be used; and in mixtures, attention should be paid not to unite them with incompatible substances.

MIXTURES.

These are chiefly simple suspensions of insoluble substances in fluids, by means of mucilages. Mixture of scammony consists of the resin dissolved in milk. The compound senna mixture and the aromatic mixture of iron are aqueous solutions of the ingredients with the addition of a little spirit to preserve them. All mixtures should always be extemporaneous preparations; and the only attention required in ordering them is not to bring together incompatible substances. These are pointed out in their places in the body of this work.

MUCILAGES.

These, which are simple solutions of gum in water, are of a thick consistence and adhesive. They should be strained through muslin, in order to separate the extraneous matters which have adhered to the gum. When thick, they may be kept for a considerable time without undergoing any change.

OILS, EXPRESSED OR FIXED.

These oils are compounds of oxygen, hydrogen, and carbon. They are prepared by nature in the seeds and fruits of some vegetables, from which they are expressed, and hence their appellation: but the title *fixed oils* is preferable, as it implies their character, and as some of the volatile oils also are obtained by expression. Those which are expressed without heat are to be preferred, as by heat they are apt to acquire acrimony and an empyreumatic odour. The greater number of them, when pure, are liquid in a moderate temperature, unctuous, perfectly transparent, colourless, or having a pale yellow or greenish tinge; inodorous; lighter than water, and not miscible with it: they unite with alkalis and form soap, and with oxide of lead and form plasters. Almond and olive oil should be insipid; linseed and castor oils have some taste, but they should not feel hot nor acrid in the throat. Palm oil is a soft solid, or butter.

The rancidity of oils probably depends on the absorption of oxygen, on which account they should be kept in bulk as much as possible, and in narrow-necked bottles, so that a very small surface only will be exposed to the air.

OILS, DISTILLED OR VOLATILE.

For similar reasons to those stated above, regarding expressed oils, we prefer the title of *volatile oils* for these preparations. They are mostly compounds of oxygen, hydrogen, and carbon, and in some instances also of nitrogen; and are produced by nature in various parts of the vegetable system; either in the flowers, the fruit, the leaves, the bark, the wood, and sometimes in all of these parts. The majority of them are obtained by distillation, but some of them by expression. They possess the unctuous, inflammable, and viscid characters of the fixed oils; but they are in general coloured, odoriferous, pungent, and acrid. The majority are lighter than water, but some of them are heavier, and some congeal at a moderate temperature. They are dissolved in small quantity, in *distilled water*, by simple agitation. Almost all of them are soluble in alcohol, and

miscible with fixed oils, and with each other; hence they are often adulterated with alcohol, or with oil of olives or of almonds, or with oil of turpentine, which is the cheapest of the volatile oils. The first is discovered by a slight increase of temperature and a milky appearance, when the oil is mixed with water; the second by a greasy stain being left on paper on which the oil is dropped and exposed to a considerable heat, and by not being soluble in alcohol; and the third by its odour, when the suspected oil is dropped on paper and heated, or sometimes even when rubbed between the fingers.

The odour and taste are the usual tests of their goodness; and to preserve them they should be kept in a cool place, in small bottles, quite full, and well corked.

OINTMENTS, LINIMENTS.

These are preparations nearly resembling each other, but of a different degree of consistence. The ointments should have the consistence of butter, while the liniments are scarcely thicker than common oil. The most important circumstance in these preparations is the freshness of the fat and oils employed, and their preservation in this state. The mercurial ointment, however, forms an exception to this rule, as a slight degree of rancidity of the lard facilitates the oxidation of the mercury and the formation of the ointment; and old mercurial ointment is always more to be depended upon than that which has been recently prepared.

PILLS.

These are masses of a proper consistence for forming into pills, and are preserved in this state by being kept in covered pots, wrapped in bladders, and occasionally moistened. A pill should not exceed gr. v. in weight.

PLASTERS.

A chemical union takes place between the semivitreous oxide of lead and oil, and a solid, hard compound is formed, tenacious in a moderate degree of heat. This forms the base of the majority of the plasters; but some of them owe their consistence to wax and resin. They should not adhere to the hand when cold, should be easily spread when heated, and remain tenacious and pliant after they are spread. Those that contain metallic oxides ought to be melted by the heat of boiling water, for in a greater degree of heat the fatty matter is apt to reduce the oxide. All plasters become too consistent by age; when this is the case, they may be re-melted by a gentle heat, and some oil added to them. They are spread either on linen, silk, or leather.

POWDERS.

This class is the simplest, and perhaps may be thought the least objectionable, form of exhibiting medicines; but, nevertheless, this mode of preparation is hurtful to many remedies. Some substances cannot be reduced to powder unless very much dried, and the heat necessary to effect this alters their properties; even the impalpable form given to powders is hurtful to some resinous substances; and if we reflect that many of these, when kept in the mass, have their surface altered by the action of the atmosphere, we shall not wonder that a great alteration should be effected in a short time by so great an extension of surface as takes place in the formation of a fine powder: this is particularly the case with *cinchona*, *rhubarb*, and *guaiacum*. It would, perhaps, be a good general rule to keep all powders in opaque or green glass bottles; for, besides those which are generally known to be hurt by the action of light, almost every powder is in some degree affected by it: hence the labelled sides of clear bottles, containing powders, which are always turned to the light, become, as it were, incrustated with the powder changed in its colour while the other side remains clean.

SPIRITS.

This title comprehends spirituous solutions, prepared by simple mixture, by solution, and by distillation. They are uniform, transparent, unchanging solutions. In the majority they are prepared by mixing a solution in the proportion of one minim of volatile oil to forty-nine minims of rectified spirit. The spirit of camphor contains one ounce in ten ounces, and the spirit of chloroform one in twenty. Spirit of nitrous ether, aromatic spirit of ammonia, foetid spirit of ammonia, and compound spirit of horseradish are ordered to be distilled. They should be perfectly free from impurities and empyreuma, and have the odour and taste of the volatile oils of the substances from which they are distilled.

SULPHUR PREPARATIONS.

The combinations of sulphur with the alkalis and the earths are named *sulphides*, and require to be carefully preserved from the atmosphere, as they attract moisture from it, deliquesce, and are decomposed. When they are mixed with water, the oxygen of the water acidifies part of the sulphur, and forms sulphates; while one part of the hydrogen, uniting with a portion of the sulphur, volatilises in the form of sulphuretted hydrogen gas, and another assists in producing hydrosulphates of the alkaline

base. One test of the goodness of concrete sulphides is their want of odour; for whenever the fœtid gas is evident, decomposition has already commenced. There are no official sulphides.

SUPPOSITORIES.

Eight suppositories are in the present Pharmacopœia: viz., carbolic acid, tannic acid, tannic acid with soap, mercurial, iodoform, morphine, morphine with soap, and compound lead. When not otherwise expressed in the name, oil of theobroma is employed. Those designated *cum sapone* have curd soap and glycerine of starch.

SYRUPS.

These are saturated solutions of sugar in water, either simple or united with some vegetable principle, with the view to colour, flavour, or medical virtue. With few exceptions, as regards the last intention, this is perhaps the worst of all forms for obtaining the medical powers of substances; syrups are also used chiefly to render the more active preparations palatable. Upon the whole, however, they do not even answer this intention well, few persons thinking that sweetness renders a nauseous drug more palatable; and they might therefore be easily dispensed with.

In the new Pharmacopœia, a little spirit has been added to most of the syrups, to prevent fermentation. Any of them, however, may be made by adding to min. xl. to fl. dr. j. of simple syrup, min. x. of the particular tincture. A small quantity only should be retained for immediate use, and the stock kept in a good cellar in a temperature not exceeding 55° F. They should never be used after they have begun to ferment.

TABLETS (TABELLÆ).

Flat pieces of chocolate introduced as a convenient method for employment of nitro-glycerine.

TINCTURES.

Tinctures are spirituous solutions of vegetable, animal, and some saline substances. They are made either with pure alcohol, with proof spirit, with aromatic spirit of ammonia, or with spirit of ether. They ought not to be united with any vehicle which can decompose the tincture, or separate anything from it in a palpable form.

Many of the tinctures prepared with rectified spirit or aromatic spirit of ammonia require, in prescribing, the addition of mucilage, to suspend resinous or oily matters, which would otherwise be precipitated by water.

VEGETABLES.

Vegetable substances ought to be collected in a dry season, when moistened neither by showers nor dew. They should be gathered annually, and not kept beyond a year. Roots and rhizomes ought to be dug up when the leaves and old stem have fallen off, and before the new ones are put forth. Barks ought to be collected in the season when they can be most easily separated from the wood. Herbs and leaves ought to be gathered after the flowers have blown, and before the seeds have ripened. Flowers must be gathered when freshly blown. Fruits and seeds must be collected when ripe.

As the collection of vegetable substances cannot be attended to by the medical practitioner, the directions usually given relative to the mode and time of gathering plants are of less importance than a knowledge of their botanical characters, and their proper appearance when well and recently dried; for many inert plants are often introduced by the collectors among those which possess the most active and useful properties. They are generally tied in bundles, and hung up in the air, without any regard to the action of light, which often very materially affects both the colour and the efficacy of the vegetable; but it would be better to pick the flowers and leaves from the stems, when these are useless, and cut roots into small pieces after they are well dried, and preserve them in closely covered tin canisters or oil jars lined with paper. Some things, as, for instance, the squill bulb and the colchicum corm, should always be dried by a skilled person. Both should be cut transversely; the laminae of the bulb should be separated and dried by a heat under 150° F. (65.5° C.), after which the pieces ought to be friable, and have as bitter and as acrid a taste as the moist bulb. The corms should be dried in transverse slices.

WINES.

Wine is a tolerably good menstruum for many vegetable principles; but it is liable to the objection of inequality of strength, and medicated wines are more liable to suffer decomposition from keeping than tinctures. In the pharmacopœial wines sherry is employed as the menstruum. They should be kept in well-corked bottles in a cool place.

EXPLANATIONS OF THE REFERENCES.

N. O. Natural Order.

h Signifies that the plant is a shrub or tree.

∩ That it is a perennial.

⊙ That it is annual.

♂ That it is biennial.

Comp. Implies *components*, showing the chemical constituents of the substance under consideration.

Prop. Its chemical and natural properties.

Oper. Its operation or medicinal effects.

Use. Its medical uses.

Incomp. The incompatibles, or those substances with which it cannot be combined in prescription, without altering either its chemical or its medicinal properties.

Off. Prep. Official preparations into which the substance under consideration enters as a part.

CONSPECTUS.

ACACIÆ GUMMI. Gum Acacia. (*Acacia Senegal* and other species of Acacia. N.O. *Leguminosæ*. Africa. *h*) Gum exuded from the stem of one or more species of Acacia and dried in the air.

Comp.—Carbon, hydrogen, oxygen, nitrogen, and calcium.

Prop.—Inodorous, insipid; in irregular spheroidal pieces, colourless, or of a pale yellow colour; hard, brittle, fracture shining, cracked and semi-transparent, soluble in water, insoluble in alcohol: sp. gr. 1.355.

Oper.—Demulcent.

Use.—In affections of mucous membranes, especially the pulmonary and urino-genital.

Dose.—In substance, gr. xxx. to a quarter of an ounce. In decoctions *ad libitum*.

Test.—The aqueous solution forms with subacetate of lead an opaque white jelly; the powder does not become blue on addition of solution of iodine.

Incomp.—Goulard's extract, alcohol, sulphuric ether, tincture of perchloride of iron.

Off. Prep.—*Mucilago Acaciæ*. *Mistura Cretæ*. *Mistura Guaiaci*. *Pulv. Amygdalæ Comp.* *Pulv. Tragac. Comp.* *Trochisci*, in all.

ACETATE OF SODIUM (Appendix, B.P.)

Comp.— $\text{NaC}_2\text{H}_3\text{O}_2 \cdot 3\text{H}_2\text{O}$.

Use.—In the preparation of the test solution employed in testing phosphate of calcium. It also enters into the preparation of acetic ether.

ACĒTUM. Vinegar. (An acid liquid, prepared from malt and unmalted grain by the acetous fermentation.)

Comp.—Acetic acid, water, traces of sulphuric acid, extractive.

Prop.—Brown colour; pungent and peculiar odour; pleasant acid taste; sp. gr. 1.017 to 1.019.

Oper.—Refrigerant, diaphoretic, astringent; externally stimulant and discutient.

Use.—In febrile complaints, hæmorrhages, and scurvy; to counteract the effects of opium and other narcotics, after the stomach has been completely cleared; steam of it inhaled in putrid sore throats and in scurvy; as a lotion in bruises, sprains, burns, and chronic ophthalmia.

Dose.—Fl.dr.j. to fl.unc.j. In clysters fl.unc.j. to fl.unc.ij. Lotion: R̄ Aceti fl.unc.j.; spiritus ten. fl.unc.iv.; aquæ fl.unc.viiij.

Tests.—The colour of common vinegar should not be affected by sulphuretted hydrogen, and very slightly by chloride of barium or oxalate of ammonium. 445.4 grs. by weight (1 fl.unc.) require at least 402 grain measures of the volumetric solution of soda for their neutralisation, corresponding to 5.41 per cent. of anhydrous acetic acid. One fluid ounce should saturate dr.j. of crystallised carbonate of sodium; 10 min. of the liquor barii chloridi should entirely precipitate the sulphuric acid.

Off. Prep.—*Emplastrum Saponis Fuscum*.

ACĒTUM CANTHĀRIDIS. Vinegar of Cantharides. (*Cantharidis in pulverem redactæ* unc.ij.; *Acidi Acetici Glacialis* unc.ij.; *Acidi Acetici* fl.unc.xviij. vel q.s. Digest the Cantharides at a temperature of 200°F. (93°-3 C.) in 13 fl. oz. of the acetic acid previously mixed with the glacial acid; transfer the ingredients to a percolator, and add sufficient acetic acid to the clear expressed liquor with the filtered residuum to make a pint.) Sp. gr. about 1.060.

Comp.—Acetate of Cantharidin and some animal matter.

Oper.—Rubefacient, epispastic, diuretic.

Use.—To form an immediate blister.

ACĒTUM SCILLÆ. Vinegar of Squill. (*Scillæ contusæ* unc.ijss.; *Acidi Acetici Diluti* Oj. Macerate the squill in acetic acid for 7 days, strain with expression, and filter.)

Comp.—The acid resin of the bulb, and the bitter principle, Scillitoxin, dissolved in dilute acetic acid.

Prop.—Taste bitter and acidulous.

Oper.—Diuretic, expectorant, emetic.

Use.—In dropsies, asthma, and chronic catarrh.

Dose.—Min. xv. to min. xl.

Off. Prep.—*Oxymel Scillæ*. *Syrupus Scillæ*.

ACĪDUM ACĒTĪCUM. Acetic Acid. (Prepared from wood by destructive distillation.)

Comp.—Water and anhydrous acetic acid in the proportion of 33 per cent. of real acetic acid, $\text{HC}_2\text{H}_3\text{O}_2$.

Prop.—Odour very pungent and grateful; taste acid and acrid; sp. gr. 1.044, very volatile. 182 grs. by weight require for neutralisation 1000 grain-measures of the volumetric solution of soda. It should not be coloured by sulphuretted hydrogen, nor precipitated by chloride of barium or nitrate of silver. If fl.dr.j. mixed with fl.unc.ss. of distilled water and half a drachm of pure hydrochloric acid be put into a small flask with a little granulated zinc, and while the effervescence continues a slip of bibulous paper moistened with a solution of subacetate of lead be suspended in the flask above the liquid for about 5 minutes, the paper will not be discoloured.

Oper.—Stimulant, rubefacient, escharotic.

Use.—Applied to the nostrils in syncope, asphyxia, and headache; destroys corns and warts.

Incomp.—Alkalis, earths, alkaline and earthy carbonates.

Off. Prep.—*Acetum Cantharidis. Acid. Acet. Glac. Acid. Acet. Dil. Ext. Colch. Acet. Oxy mel.*

ACĪDUM ACĒTICUM DILŪTUM. Diluted Acetic Acid. (*Acidi Acetici* Oj.; *Aquæ Destillatæ* Ovij.) Specific grav. 1.006. 440 grs. by weight (fl.unc.j.) require for neutralisation 313 grain-measures of the volumetric solution of soda, corresponding to 4.27 per cent. of real acetic acid; fl.unc.j. is equivalent to 19 grs. of real acid.

Dose.—Fl.dr.j. to fl.unc.j.

Off. Prep.—*Acetum Scillæ. Liq. Morphinæ Acetatis.*

ACĪDUM ACĒTĪCUM GLACIĀLE. Glacial Acetic Acid. (Prepared by the action of sulphuric acid on acetate of sodium.)

Comp.—Real acetic acid, nearly 99 per cent.

Prop.—It crystallises when cooled, and remains crystalline until the temperature rises to above 60° F. (15°·5 C.) Sp. gr. 1.058. Its physical properties the same, though stronger than the acidum aceticum. 60 grains by weight mixed with fl.unc.j. of distilled water require for neutralisation 990 grain-measures of volum. sol. of soda.

Oper.—Stimulant, vesicant, escharotic.

Use.—The same as Acidum Aceticum.

ACĪDUM ARSENIOSUM. Arsenious Acid. *Syn.* Arsenicum Album; White Arsenic; Arsenious Anhydride. (The acid of commerce purified by sublimation.)

Comp.— As_2O_3 .

Prop.—A heavy white or semi-transparent, inodorous, tasteless powder; sublimed in a glass tube it is converted into colourless octahedral crystals. Mixed with charcoal and exposed to heat it is reduced to metallic arsenic, exhaling an alliaceous odour. It is soluble in boiling water, and octahedral crystals are deposited on cooling; from this solution a yellow precipitate falls on the addition of sulphuretted hydrogen; and a canary-yellow precipitate, insoluble in water, but soluble in ammonia and nitric acid, on the addition of ammonio-nitrate of silver. It is entirely vaporised at a temperature not exceeding 400° F. (204°·4 C.) 4 grs. dissolved in boiling water with 20 grs. of bicarbonate of sodium discharge the colour of 808 grain measures of the volumetric solution of iodine.

Use.—To prepare the arsenical solution.

Dose.—Gr. $\frac{1}{50}$ to gr. $\frac{1}{12}$, but employed only in the form of the official preparations.

Off. Prep.—*Liq. Arsenicalis. Liq. Arsenici Hydrochlor. Arsenii Iodidum. Sodii Arsenias.*

ACĪDUM BENZOÏCUM. Benzoic Acid. (Sublime benzoin, press the sublimate between bibulous paper, and sublime a second time.)

Comp.— $\text{HC}_7\text{H}_5\text{O}_2$.

Prop.—In light feathery crystalline plates and needles, which are flexible, and white, or nearly so; odour aromatic and fragrant; taste hot, slightly acidulous, and agreeable; soluble in boiling water, alcohol, and in the solutions of the caustic alkalis and of lime; should sublime entirely by heat.

Oper.—Stimulant, expectorant, and diuretic.

Use.—In chronic catarrh, but of very little efficacy; often used in chronic cystitis, being converted into hippuric acid by the kidneys during elimination, and thus rendering the urine acid.

Dose.—Gr. x. to gr. xv.

Off. Prep.—*Ammonii Benzoas. Tinct. Camphoræ Co. Tinct. Opii Ammoniata. Trochisci Acidi Benzoici.*

ACĪDUM BORĪCUM. Boric Acid. *Syn.* Boracic Acid. (Obtained by the action of sulphuric acid on borax, and by the purification of native boric acid.)

Comp.—Hydrogen, boron, and oxygen. Chemical formula, H_3BO_3 .

Prop.—Colourless, pearly, lamellar crystals, or irregular masses of crystals; unctuous to the touch; taste feebly sour and bitter. Soluble in water, glycerine, and rectified spirit. Turmeric paper, moistened with an aqueous solution slightly acidified with hydrochloric acid, becomes brownish red on gently drying, and this colour changes to a greenish if solution of potash be added. An alcoholic solution burns with a green flame.

Oper.—Antiseptic, devoid of irritating properties.

Use.—To correct foetid odours, &c., employed as lotion, ointment, or as Boracic Lint (prepared by soaking lint in a hot saturated solution). Occasionally employed internally to render the urine acid and remove foetor.

Dose.—Gr.v. to gr.xxx.

Off. Prep.—*Ung. Acidi Borici.*

ACĪDUM CARBŎLĪCUM. Carbolic Acid. *Syn.* Phenic Acid; Phenol; Phenic Alcohol. (An acid obtained from coal tar by fractional distillation and subsequent purification.)

Comp.— HC_6H_5O .

Prop.—In acicular crystals, or in acicular crystalline masses, colourless or with slight reddish or brownish tinge, becoming at $91^{\circ}5$ F. (33° C.) an oily liquid with taste and colour of creasote. Sp. gr. 1.060 to 1.066; boils at 370° F. ($187^{\circ}7$ C.) The crystals on exposure absorb moisture, are but slightly soluble in water, but freely so in alcohol, ether, and glycerine. The acid does not redden litmus paper; it coagulates albumen. Neutral solution of perchloride of iron strikes a deep purple colour, and bromine water gives a white precipitate with a cold saturated aqueous solution of carbolic acid.

Oper.—Antiseptic; in most respects like creasote.

Use.—To correct foetid odours, whether in sick rooms or as an application to ulcers, or as a sedative in neuralgia and vomiting.

Dose.—Externally to ulcers, 1 part of the acid to 20 or 40 of water; internally, gr.j. to gr.ijj. in form of pills.

Off. Prep.—*Glycerinum Acidi Carbolici. Acid. Carbol. Liq. Suppos. Acid. Carbol. cum Sapone. Unguentum Acid. Carbol.*

ACĪDUM CARBŎLĪCUM LIQUEFACTUM. Liquefied Carbolic Acid.

Comp.—Carbolic acid liquefied by the addition of 10 per cent. of water.

Prop.—A colourless or very slightly reddish or brownish liquid, with taste, odour, &c., of carbolic acid.

Oper. & Use.—Like those of carbolic acid.

Dose.—Min.j. to min.iv.

ACĪDUM CHRŎMĪCUM. Chromic Acid. *Syn.* Anhydrous Chromic Acid; Chromic Anhydride. (*Potass. Bichrom. unc. xxx. ; Acidi Sulphur. fl.unc. lvij. ; Aquæ Destillatæ q.s.* Dissolve the bichromate in 50 fl. oz. of water and 42 fl. oz. of the acid. Set aside for 12 hrs. and decant the liquor from the crystals of acid sulphate of potassium that have separated. Heat the liquor to about 185° F. (85° C.), and add the remainder of the acid, and water sufficient to just redissolve any crystals of chromic acid that may have been formed. Allow to

cool, collect and drain the crystals, and dry them on porous tiles at a temperature not exceeding 100° F. (37° 8 C.)

Comp.—An anhydride (not a true acid). Chemical formula, CrO_3 .

Prop.—Crimson acicular crystals, very deliquescent, inodorous, corrosively caustic to the skin. Mixed with cold alcohol, aldehyd is evolved, and a green residue remains. It is soluble in water, yielding a deep orange-red solution. When in contact with alcohol, glycerine, and some other organic compounds, sudden combustion or explosion may ensue.

Oper.—Caustic, antiseptic and disinfectant.

Use.—To destroy condylomata, the official solution (1 in 4) being employed for this purpose. For ulcerated gums, and syphilitic affections of the tongue, pharynx, and larynx, a solution of 1 in 40 is employed. In a more dilute form chromic acid is an efficient inexpensive antiseptic.

Off. Prep.—*Liquor Acidi Chromici*.

ACIDUM CITRICUM. Citric Acid. (Crystals.) A crystalline acid prepared from lemon juice, or from the juice of the *Citrus Bergamia* (*Citrus Limetta*), the Lime. (*Succi Limonis* Oiv.; *Cretæ Præparatæ* unc.ivss.; *Acidi Sulphur.* fl.unc.ijss.; *Aquæ Destill.* q.s. Add chalk to the boiling lemon juice till the effervescence ceases, wash the deposit collected on a calico filter till it is colourless; mix it in a pint of distilled water, and gradually add the sulphuric acid diluted with a pint and a half of distilled water. Boil for half an hour, keeping the mixture constantly stirred. Separate the acid solution by filtration, wash the insoluble matter with a little distilled water, and add the washings to the solution. Concentrate this to the density of 1.21; let it cool, and after 24 hours decant the liquor; further concentrate till a film forms on the surface, then set aside to crystallise.)

Comp.— $\text{H}_3\text{C}_6\text{H}_5\text{O}_7, \text{H}_2\text{O}$.

Prop.—Sharp acidity of lemon juice; crystals right rhomboidal prisms, persistent, white, semi-transparent; soluble in less than twice their weight of cold water, and in half their weight of boiling water; less soluble in rectified spirit, and insoluble in pure ether; 70 grains dissolved in distilled water are neutralised by 1000 grain-measures of the volumetric solution of soda. Burned with free access of air, no ash is left.

Oper.—Refrigerant.

Use.—In febrile and inflammatory complaints, and in scurvy; and dissolved in water, instead of recent lemon juice, for the effervescing draught. (Proportion fl.dr.xjss. to water Oj.)

Dose.—Gr.x. to gr.xxx, dissolved in water or any bland fluid.

Incomp.—Sulphuric acid, nitric acid, acetates of lead, nitrate and acetate of mercury, alkalis, alkaline sulphides.

Tests.—Chloride of barium for detecting sulph. acid; acetate of potassium for tartaric acid; sulphuretted hydrogen for metallic impurities.

Off. Prep.—*Vinum Quininæ*.

ACIDUM GALLICUM. Gallic Acid. (Crystals obtained from Galls.)

Comp.— $\text{H}_3\text{C}_7\text{H}_3\text{O}_5, \text{H}_2\text{O}$.

Prop.—Acicular crystals, generally of a fawn colour, but sometimes colourless, inodorous, with a slightly acidulous styptic taste, leaving a sweetish impression in the mouth; sparingly soluble in cold water; soluble in 3 parts of boiling water and in alcohol. Renders

solution of a persalt of iron bluish black, gives no precipitate with isinglass, and burns without residue. The crystals when dried at 212° F. (100° C.) lose 9.5 per cent. of their weight.

Oper.—Astringent, styptic.

Use.—In hæmorrhages, colliquative sweats and diarrhœa, and desquamative nephritis.

Dose.—Gr. ij. to x, in pill, or suspended in water by mucilage, 2 or 3 times a day.

Off. Prep.—*Glycerinum Acidi Gallici.*

ACĪDUM HYDROBRŌMĪCUM DILŪTUM. Diluted Hydrobromic Acid.

Comp.—An aqueous solution containing 10 per cent. by weight of real hydrobromic acid, HBr. Prepared by passing sulphuretted hydrogen through an aqueous solution of bromine until the red colour disappears, then filtering and distilling. The distillate is rejected until free from odour of sulphuretted compounds, and the process is stopped when sulphuric acid begins to come over.

Prop.—Colourless, inodorous; taste sour, reaction acid. Sp. gr. 1.077. Bromine is set free by addition of chlorine water. Nitrate of silver throws down a white curdy precipitate insoluble in nitric acid, and sparingly soluble in ammonia. 810 grs. by weight require for neutralisation 1000 grain-measures of the volumetric solution of soda.

Oper.—Sedative and hypnotic.

Use.—In laryngismus stridulus, whooping cough, epilepsy, delirium tremens, &c., as a substitute for bromide of potassium or bromide of ammonium. It is free from the depressing after-effects of the salt of potassium.

Dose.—Min. xv. to min. l. properly diluted.

Test.—Chloride of barium for sulphuric acid.

ACĪDUM HYDROCHLORĪCUM. Hydrochloric Acid. *Syn.* Muriatic Acid. (From chloride of sodium by the action of sulphuric acid.)

Comp.—Hydrochloric acid gas in water, forming about 32 per cent. by weight of the solution. Chemical formula, HCl.

Prop.—Colourless; sp. gr. 1.16. Emits suffocating white fumes on exposure to the air, entirely vaporised by heat; mixed with water gives no precipitate with chloride of barium or sulphuretted hydrogen, ammonia, or the carbonate; nitrate of silver throws down a curdy white precipitate, soluble in excess of ammonia, but not in nitric acid; does not tarnish bright copper foil in boiling. 114.8 grs. by weight, mixed with fl.unc.ss. of distilled water, are neutralised by 1000 grain-measures of the volumetric solution of soda.

Oper.—Tonic, astringent; externally caustic.

Use.—In typhus; dyspepsia; cutaneous eruptions; in gargles in inflammatory and putrid sore throats; in injection in gonorrhœa.

Dose.—Min. ij. to min. viij. properly diluted; in gargles fl.dr.ss. to fl.dr.j. in Oj. of fluid; injection min.vij. to water fl.unc.iv.

Incomp.—Alkalis, earths, and their carbonates, metallic oxides, sulphide of potassium, tartrate of potassium, tartar emetic, and most metallic salts.

Tests.—Chloride of barium in the diluted acid for sulph. acid; ammonia for salts of iron. Bibulous paper moistened with a solution of subacetate of lead is not discoloured by the vapour arising from the action of the acid on a piece of zinc.

Off. Prep.—*Acidum Hydrochloricum Dilutum.* *Acidum Nitro-hydrochloricum Dilutum.* *Liquor Antimonii Chloridi.* *Liquor Arsenici Hydrochloricus.*

ACIDUM HYDROCHLORICUM DILUTUM. Diluted Hydrochloric Acid. (*Acidi Hydrochlorici* fl.unc.viij.; *Aquæ Destillatæ* q.s. Dilute the acid with 16 oz. of water, then add more water; at 60° F. (15°·5 C.) the mixture shou'd measure 26½ fl. oz.)

Test.—Sp. gr. 1·052; 345 grs. by weight (fl.dr.vj.) are neutralised by 1000 grain-measures of the volumetric solution of soda, corresponding to 10·58 per cent. of real acid.

Dose.—Min.x. to min.xxx.

Use.—The same as the strong acid.

Off. Prep.—Used in preparation of *Liq. Morphine Hydrochloratis* and *Liq. Strychnine Hydrochloratis.*

ACIDUM HYDROCYANICUM DILUTUM. Diluted Hydrocyanic Acid. (*Potassii Ferrocyanidi* unc.2¼; *Acidi Sulph.* fl.unc.j.; *Aq. Dest.* fl.unc.xxx. vel q.s.)

Comp.—Anhydrous hydrocyanic acid dissolved with water and constituting 2 per cent. by weight of the solution. Chemical formula, HCN.

Prop.—Colourless, transparent, with a peculiar odour; taste sweetish and bland at first, afterwards pungent and acrimonious; very volatile; decomposed by a high temperature and light, gives a slight and transient redness to litmus paper. Sp. gr. ·997.

Oper.—Sedative.

Use.—In spasmodic coughs; asthma and whooping cough; hiccough, and in allaying the irritability of the stomach in dyspepsia. As a local application, properly diluted, it is useful in abating the itching in impetigo and pruriginous affections.

Dose.—Min.ij. gradually increased to min.viij. in a glassful of water, almond emulsion, or infusion of cinchona. When an overdose has been taken, the effects are best counteracted by ammonia, chlorine, brandy, and the cold affusion.

Incomp.—Metallic oxides, chlorine.

Tests.—100 grains treated with nitrate of silver should precipitate gr.x. of cyanide of silver; if iodo-cyanide of potassium and mercury redden the acid, it contains some other acid. Chloride of barium causes no precipitate in the pure acid. 270 grs. rendered alkaline by soda require 1000 grain-measures of the volumetric solution of nitrate of silver to be added before a permanent precipitate begins to form, which corresponds to 2 per cent. of the real acid.

Off. Prep.—*Vapor Acidi Hydrocyanici.* *Tinctura Chloroformi et Morphine.*

ACIDUM LACTICUM. Lactic Acid. Produced by action of a ferment on a solution of sugar.

Comp.—Lactic acid, $\text{HC}_3\text{H}_5\text{O}_3$, with about 25 per cent. of water.

Prop.—Colourless, syrupy liquid, taste and reaction acid. Sp. gr. 1·21. Readily miscible with water, alcohol, and ether, nearly insoluble in chloroform. It vaporises when heated, the gases evolved ignite, the residue chars and finally almost entirely disappears. 120 grs. are neutralised by 1000 grain-measures of volumetric solution of soda.

Oper.—Similar to that of hydrochloric acid.

Use.—As spray or lotion in diphtheria; also in dyspepsia, vesical catarrh, and diabetes.

Tests.—Warmed with permanganate of potassium, it gives the odour of aldehyd. Diluted with 10 parts of water and neutralised with ammonia, it is not precipitated by sulphhydrate of ammonium. It gives only a faint opalescence with chloride of barium, nitrate of silver, or oxalate of ammonium, and gives no precipitate on boiling with excess of Fehling's solution.

Off. Prep.—*Acidum Lacticum Dilutum*.

ACĪDUM LACTĪCUM DILŪTUM. Diluted Lactic Acid. (*Acidi Lactici* fl.unc.ij.; *Aque Destillatæ* q.s. The acid is mixed with sufficient distilled water to produce 20 fl. oz.)

Prop.—Sp. gr. 1.040; 800 grains by weight are neutralised by 1000 grain-measures of the volumetric solution of soda.

Dose.—Fl.dr.ss. to fl.dr.ij.

Use.—The same as the strong acid.

ACĪDUM MĒCŌNĪCUM. Meconic Acid. An acid obtained from opium.

Comp.— $\text{H}_3\text{C}_7\text{HO}_7$.

Prop.—Micaceous crystals, nearly colourless, sparingly soluble in water, freely in alcohol. The solution in water has acid taste and reaction.

Use.—To prepare the Solution of Bimeconate of Morphine.

Tests.—Solution in water reddened by neutral solution of perchloride of iron, the colour discharged by strong hydrochloric acid. An aqueous solution gives no precipitate with solution of iodine and iodide of potassium, showing the absence of alkaloids.

ACĪDUM NĪTRĪCUM. Nitric Acid. (Prepared from nitrate of potassium or nitrate of sodium by distillation with sulphuric acid and water, and containing 70 per cent. by weight of real nitric acid.)

Comp.— HNO_3 and water.

Prop.—Odour suffocating, taste very acid and caustic, corrosive, liquid, colourless or yellowish, transparent; absorbs water from the air; tinges the skin yellow. Sp. gr. 1.42. Gives off dense red fumes when poured on copper filings; if the acid be diluted with an equal volume of water, the gas given off is found colourless, but acquires an orange-red colour on mixing with the air. It boils at 250°F. (121°C.) 90 grains, by weight, mixed with half an ounce of distilled water, are neutralised by 1000 grain-measures of the volumetric solution of soda. It should not precipitate solution of nitrate of silver or of chloride of barium, when diluted with distilled water.

Oper.—Tonic, antisyphilitic, escharotic.

Use.—As an external application to phagedænic and cancerous ulcers; but otherwise the strong acid is seldom used for any other than pharmaceutical purposes; in the form of vapour, it is extracted from nitre gr.ccxl. and sulphuric acid fl.dr.iv. in a saucer, placed on a pipkin of hot sand, for the purposes of fumigation.

Incomp.—Spirit of lavender, and the strong tinctures, in any large quantities; and the essential oils; metallic oxides.

Off. Prep.—*Acidum Nitricum Dilutum*. *Acidum Nitro-hydrochloricum Dil.* *Acidum Phosphoricum*. *Argenti Nitras*. *Bismuthi Carbonas*. *Bismuthi Subnitras*. *Liquor Ferri Pernitratis*. *Liquor Hydrargyri Nitratis Acidus*. *Hydrargyri Oxidum Rubrum*. *Ung. Hydrarg. Nit.*

ACĪDUM NĪTRĪCUM DILŪTUM. Diluted Nitric Acid. (*Acidi Nitrici* fl.unc.vj.; *Aque Destillatæ* q.s. Dilute the acid with 24 fl.oz.

of water, and then add more, until at 60° F. (15°·5 C.) it shall measure 31 oz.)

Prop.—Sp. gr. 1·101. The same as nitric acid in a weaker degree.

Oper.—The same as that of nitric acid.

Use.—As a drink, diluted largely, in fevers of the typhoid kind; in chronic affections of the liver; and in dyspepsia. As a remedy in venereal complaints; yet in this climate it is not to be depended on, but it is a very useful adjunct to mercury, and allays the violent irritation induced by it. It is also very useful in the cure of old ulcerated legs.

Dose.—Min.x. to min.xxx. twice or thrice a day, largely diluted.

ACĪDUM NITRO-HYDROCHLORĪCUM DILŪTUM. Diluted Nitro-hydrochloric Acid. (*Acidi Nitrīci* fl.unc.iiij.; *Acidi Hydrochlorici* fl.unc.iv.; *Aquæ Destillatæ* fl.unc.xxv. Mix the acids with the water, and preserve in a stoppered bottle for fourteen days before the mixture is used.)

Comp.—It is a solution of free chlorine, hydrochloric, nitrous, and nitric acids, and other compounds in water. 352 grains by weight (fl.dr.vj.) are neutralised by 883 grain-measures of the volumetric solution of soda.

Prop.—Odour suffocating, colourless. Sp. gr. 1·07.

Oper.—Stimulant, tonic.

Use.—Largely diluted, it has been strongly recommended in malignant scarlatina, in dyspepsia, chronic affections of the liver, in oxaluria, and in syphilis, and still more diluted as a bath in chronic derangement of the hepatic secretion, which it improves, and acts gently on the bowels.

Dose.—Min.v. to min.xx. in fl.unc.iiij. of water twice or thrice a day. When used as a bath, the mixed acid should be added to the water until it tastes as sour as weak vinegar.

Incomp.—Oxides, earths, alkalis, the sulphides, and the acetates of potassium and of lead.

ACĪDUM OLEĪCUM. Oleic Acid. Obtained by saponification of olein, or by the action of superheated steam on fats, with subsequent separation from solid fats by pressure. Usually not quite pure.

Comp.— $\text{HC}_{18}\text{H}_{33}\text{O}_2$.

Prop.—Straw-coloured liquid, nearly odourless and tasteless, with very faint acid reaction. Becomes darker and more acid on undue exposure to air. Sp. gr. ·860 to ·890. Insoluble in water, freely soluble in alcohol, chloroform, and ether. At about 40° F. (4°·5 C.) it becomes semi-solid, and again melts at about 56° F. (13°·3 C.)

Use.—Employed in preparation of official and other oleates.

Tests.—Complete saponification when warmed with carbonate of potassium. An aqueous solution of this salt neutralised by acetic acid and treated with acetate of lead should yield a precipitate almost entirely soluble in ether.

Off. Prep.—*Oleatum Hydrargyri.* *Oleatum Zinci.*

ACĪDUM OXALĪCUM. Oxalic Acid. (Appendix, B.P.)

Comp.— $\text{H}_2\text{C}_2\text{O}_4 \cdot 2\text{H}_2\text{O}$.

Prop.—Crystals transparent, tetrahedral prisms, soluble in water and alcohol, entirely destroyed by heat below 350°.

Use.—In quantitative and qualitative analysis. It is purified by dissolving the acid in water, filtering and recrystallising.

ACĪDUM PHOSPHORĪCUM CONCENTRĀTUM. Concentrated Phos-

phoric Acid. Obtained by dissolving phosphorus in nitric acid, concentrating by evaporation until orange vapours are no longer formed, and then mixing with distilled water to a sp. gr. of 1.5.

Comp.—Phosphoric acid with 33.7 per cent. of water. Chemical formula, H_3PO_4 .

Prop.—Colourless syrupy liquid with sour taste and strongly acid reaction. 73.8 grs. by weight mixed with 180 grs. of oxide of lead in fine powder leave by evaporation a residue (chiefly phosphate of lead), which, after it has been heated to dull redness, weighs 215.5 grs.

Oper.—Tonic, refrigerant, caustic.

Uses.—Similar to those of hydrochloric acid. In tendency to formation of phosphatic calculi; in cachexia, or general debility, especially after nervous exhaustion; and to allay diabetic thirst.

Dose.—Min.ij. to min.v.

Tests.—Ammonio-nitrate of silver with diluted solution gives a canary-yellow precipitate soluble in ammonia and in diluted nitric acid. After dilution it is not precipitated by sulphuretted hydrogen, chloride of barium, nitrate of silver, or solution of albumen. Mixed with an equal volume of pure sulphuric acid, and then introduced into a solution of sulphate of iron, it does not produce a dark colour. Diluted and mixed with an equal volume of solution of perchloride of mercury and heated, no precipitate is produced.

Off. Prep.—*Acidum Phosphoricum Dilutum. Syrupus Ferri Phosphatis.*

ACIDUM PHOSPHORICUM DILUTUM. Diluted Phosphoric Acid. (*Acidi Phosphorici Conc. fl.unc.ijj.; Aquæ Destillatæ ad fl.unc.xx.*)

Comp.—Phosphoric acid, H_3PO_4 , in solution in water (13.8 per cent. by weight).

Prop.—Colourless, inodorous, strongly acid fluid. Sp. gr. 1.08. Six fluid drachms correspond to 35.5 grains of phosphoric anhydride (a quarter of an equivalent of P_2O_5).

Oper.—Tonic, refrigerant.

Uses.—Similar to those of concentrated phosphoric acid.

Dose.—Min.x. to min.xxx.

Test.—A precipitate by chloride of barium insoluble in nitric acid indicates sulphuric acid.

Off. Prep.—*Ammonii Phosphas.*

ACIDUM SALICYLICUM. Salicylic Acid. Obtained by the combination of carboic acid with carbonic acid, and subsequent purification, or from natural salicylates, as the oils of wintergreen and sweet birch.

Comp.— $HC_7H_5O_3$.

Prop.—White acicular crystals, inodorous, but irritating to the nostrils, taste sweetish and acid. Sparingly soluble in cold water, but readily so in alcohol, ether, and hot water; also in solutions of citrate or acetate of ammonium, phosphate of sodium, or borax.

Oper.—Antiseptic, antipyretic, anti-rheumatic.

Use.—To diminish pain in rheumatic fever; also to lower the temperature in this disease, in typhoid, and in various eruptive fevers; in pyæmia, septicæmia, puerperal fever, and in diphtheria.

Dose.—Gr. v. to gr. xxx.

Tests.—Perchloride of iron gives reddish-violet colour with an aqueous solution. An alcoholic solution should leave a perfectly white residue on spontaneous evaporation.

Off. Prep.—*Unguentum Acidi Salicylici. Sodii Salicylas.*

ACIDUM SULPHURICUM. Sulphuric Acid. An acid produced by the combustion of sulphur, and the oxidation of the sulphurous acid by means of nitrous and aqueous vapours.

Comp.—It contains 98 per cent. by weight of sulphuric acid, H_2SO_4 .

Prop.—Inodorous; strong acid taste; corrosive; fluidity dense, apparently oily; transparent, colourless. Sp. grav. 1·843. It has a powerful attraction for water, and evolves much heat on being mixed with it. 50 grains by weight neutralise 1000 grain-measures of the volumetric solution of soda.

Oper.—Escharotic, stimulant, rubefacient.

Use.—In caries and cancer; in local pains, in the form of an ointment made with lard unc.j., sulphuric acid fl.dr.j.; and in scabies, with dr.ss. of the acid to lard unc.j.

Tests.—Solution of sulphate of iron should cause no reddening at the point of contact; evaporated in a platinum dish it leaves little or no residue; diluted with water it gives no precipitate with sulphuretted hydrogen, but a copious precipitate with chloride of barium.

Off. Prep.—*Acidum Hydrochloricum.* *Acid. Hydrocyanicum Dilutum.* *Acid. Nitricum.* *Acid. Sulphuricum Dilutum.* *Acid. Sulphur. Aromaticum.* *Acidum Sulphurosum.* *Æther. Chloroformum.* *Beberinæ Sulphas.* *Cupri Sulphas.* *Ferri Sulphas.* *Ferri Sulphas Granulata.* *Hydrargyri Persulphas.* *Liq. Ferri Persulphatis.* *Quinina Sulphas.* *Zinci Sulphas.*

ACIDUM SULPHURICUM AROMATICUM. Aromatic Sulphuric Acid. (*Spiritus Rect.* fl.unc.xxxvj.; *Acidi Sulphurici* fl.unc.iiij.; *Spiritus Cinnamomi* fl.unc.ij.; *Tincturæ Zingiberis Fort.* fl.unc.ij. Mix the acid gradually with the spirit, and add the spirit of cinnamon and tincture of ginger.)

Comp.—An imperfect ether, with sulphuric acid predominating, and holding dissolved the essential oil of cinnamon and of ginger.

Prop.—Odour aromatic, taste acid and slightly ethereal, colour brownish. Sp. gr. 0·911. 195 grs. by weight require for neutralisation 500 grain-measures of the volumetric solution of soda, corresponding to about 12·5 per cent. of real sulphuric acid. 6 fl.dr. contain about 37·5 grains of real acid, H_2SO_4 .

Oper.—Stimulant, tonic.

Use.—In dyspepsia; the debility following intermittents, and other fevers, combined with vegetable bitters; and in chronic asthma.

Dose.—Min.v. to min.xxx. in fluids, twice or thrice a day.

Off. Prep.—*Infusum Cinchonæ Acidum.*

ACIDUM SULPHURICUM DILUTUM. Diluted Sulphuric Acid. (*Acidi Sulphurici* fl.unc.vij.; *Aquæ Destillatæ* q.s. Dilute the acid with 77 fluid ounces of water, and when the mixture has cooled to 60° F. (15°·5 C.) add more water, so that it shall measure 83½ fluid ounces.) Sp. gr. 1·094. 6 fluid drachms require for neutralisation 1000 grain-measures of the volumetric solution of soda, corresponding to 13·65 per cent. of real sulphuric acid. Six fluid drachms correspond to 49 grs. of real sulphuric acid, H_2SO_4 .

Prop.—Inodorous, strong acid taste, transparent, colourless.

Oper.—Tonic, astringent, refrigerant.

Use.—In dyspepsia, debility, menorrhagia, hæmoptysis, cutaneous eruptions, hectic: in gargles, in cynanche, and to check salivation.

Dose.—Min.v. to min.xxx., largely diluted; in gargles fl.dr.j. to fl.dr.iiij. in fl.unc.viiij. of fluid.

Off. Prep.—*Aconitina*. *Antimonium Sulphuratum*. *Atropina*. *Atropinæ Sulphas*. *Beberinæ Sulphas*. *Infusum Rosæ Acidum*.

ACIDUM SULPHURŌSUM. Sulphurous Acid. (Prepared by distilling sulphuric acid with wood charcoal.)

Comp.—Sulphurous acid, SO_2 , dissolved in water, and constituting 5 per cent. by weight of the solution; equivalent to 6.4 per cent. of real sulphurous acid, H_2SO_3 .

Prop.—Sp. gr. 1.025. Colourless, suffocating odour.

Oper.—Antiseptic, antiparasitic.

Use.—Externally in cutaneous diseases, dependent on vegetation—mixed with an equal part of glycerine.

Dose.—Fl.dr.ss. to fl.dr.j.

Tests.—It gives a slight precipitate, if any, with chloride of barium, but a copious one if a solution of chlorine be added. 64 grains by weight mixed with an ounce of distilled water and a little mucilage of starch do not acquire a permanent blue colour with the volumetric solution of iodine until 1000 grain-measures of the latter have been added. When evaporated it leaves no residue.

Off. Prep.—*Sodii Sulphis*.

ACIDUM TANNICUM. Tannic Acid. (*Gallar. contrit.*, *Ætheris, Aquæ destillatæ*, sing. q.s.)

Comp.— $\text{C}_{27}\text{H}_{22}\text{O}_{17}$.

Prop.—In pale yellow vesicular masses or thin glistening scales; inodorous. By exposure to air absorbs oxygen, and is converted into gallic acid. Soluble in water and rectified spirit, very sparingly in ether. The aqueous solution precipitates a solution of gelatine yellowish white, and the persalts of iron a bluish-black colour. It leaves no residue when burned with free access to air. Taste styptic, but not bitter.

Oper.—Astringent.

Use.—In atonic hæmorrhage, and in excessive secretions from mucous surfaces.

Dose.—Gr.ij. to gr. x. in pills, or dissolved in water or glycerine. Lotion, gr.vj. in aquæ unc.j.

Off. Prep.—*Glycerinum Acidi Tannici*. *Suppositoria Acidi Tannici*. *Suppos. Acidi Tannici cum Sapone*. *Trochisci Acidi Tannici*.

ACIDUM TARTARICUM. Tartaric Acid. (*Potassii Tartratis Acidæ* unc.xlv.; *Aquæ Destillatæ* q.s.; *Cretæ Præparatæ* unc.xijss.; *Calcii Chloridi* unc.xiiijss.; *Acidi Sulphurici* fl.unc. xiiij.)

Comp.— $\text{H}_2\text{C}_4\text{H}_4\text{O}_6$.

Prop.—Crystals white, oblique rhombic, imperfectly transparent, in irregular groups. It has a strongly acid taste, and is readily soluble in water and in rectified spirit; a white crystalline precipitate follows the addition of a little acetate of potassium. 25 grains of crystallised tartaric acid in solution requires for neutralisation 330 grain-measures of the volumetric solution of soda.

Oper.—Refrigerant.

Use.—In inflammatory affections, fevers, and scurvy. Often used in effervescing mixtures.

Dose.—Gr.x. to gr.xxx. dissolved in water.

Tests.—An aqueous solution is not affected by sulphuretted hydrogen, and gives no precipitate with the solution of sulphate of calcium or of oxalate of ammonium. Tartaric acid leaves no residue, or a mere trace, when burned with free access of air.

ACONITI FOLIA. Aconite Leaves. Fresh leaves and flowering tops. (*Aconitum Napellus*. N.O. *Ranunculaceæ*.) Leaves smooth, palmate, divided deeply into 5 or 3 segments, which are again divided deeply and irregularly into oblong acute narrow lobes. Flowers numerous, irregular, deep blue, in somewhat loose terminal racemes.

Prop.—Excites a tingling sensation when chewed.

Oper. & Use.—See *Aconiti Radix*.

Off. Prep.—*Extractum Aconiti*.

ACONITI RADIX. Aconite, or Monkshood root. (*Aconitum Napellus*. N.O. *Ranunculaceæ*. $\mathcal{U}$.) Mountains of Germany, and cultivated in Britain. The roots ought to be taken in the winter or in the spring, before the leaves appear, and the leaves when the flowers have just begun to expand. 2 to 3 inches long; conical; dark externally, whitish within, with central cellular axis having about 7 rays.

Prop.—Inodorous, taste bitterish-sweet, and exciting sensation of tingling and numbness; fresh very acrid.

Oper.—Narcotic, cardiac sedative.

Use.—In chronic rheumatism, sciatica, pneumonia, neuralgia. Used only in the form of preparations.

Off. Prep.—*Aconitina*. *Lin. Aconiti*. *Tinct. Aconiti*.

ACONITINA. Aconitine. (*Aconiti Rad.* q.s.; *Spir. Rect.*, *Aquæ Destillatæ*, *Ammoniacæ Liquoris*, *Ætheris Puri*, *Acidi Sulph. Dil.*, sing. q.s.)

Comp.— $C_{30}H_{47}NO_7$.

Prop.—A white and usually amorphous powder, inodorous, taste bitter, acrid, soluble in 150 times its weight of cold water, and 50 of hot; alcohol, ether, and chloroform dissolve it readily; alkaline; permanent in the air; rubbed on the skin it causes a tingling sensation, followed by prolonged numbness.

Use.—Externally anodyne; too poisonous to be used internally.

Off. Prep.—*Unguentum Aconitinæ*.

ÆDEPS BENZOATUS. Benzoated Lard. (*Adipis Præparati* lb.j.; *Benzoini* gr.cxl. Add the benzoin to the lard melted with a water-bath, frequently stirring for 2 hours; remove the residual benzoin by straining.)

Comp.—Lard mechanically mixed with benzoin.

Use.—In the formation of ointments, the benzoin tending to prevent rancidity.

ÆDEPS PRÆPĀRĀTUS. Hog's Lard separated and purified by heat. That which has been preserved with chloride of sodium is not to be used. (*Sus Scrofa*, the hog. Cl. *Mammalia*, Ord. *Pachydermata*.)

Prop.—Inodorous, insipid, soft, unctuous, white, melting at about 100° F. (37° -8 C.), soluble in ether.

Oper.—Emollient.

Use.—In the formation of ointments and plasters.

Off. Prep.—*Adeps Benzoatus*. *Unguenta varia*.

ÆTHER. Ether. *Syn.* Sulphuric Ether. (*Spir. Rect.* fl.unc.l.; *Ac. Sulph.* fl.unc.x.; *Calci Chlor.* unc.x.; *Calci Hydratis* unc.ss.; *Aquæ Destill.* fl.unc.xiiij. Prepared by the action of sulphuric acid on alcohol.)

Comp.—Contains not less than 92 per cent. of pure ether, $C_4H_{10}O$. Sp. gr. 0.735.

Prop.—A limpid, colourless, very inflammable, volatile liquor; odour penetrating and fragrant; taste, hot and pungent; inflammable, boiling below 105°F. ($40^{\circ}\cdot 5\text{C.}$); readily mixing with alcohol; soluble in ten parts of water, produces cold during its evaporation, and leaves no residue. 50 measures agitated with an equal volume of water are reduced to 45 by an absorption of 10 per cent.

Oper.—Diffusible stimulant, narcotic, antispasmodic, externally refrigerant.

Use.—Hysteria, asthma, tetanus, epilepsy, and most spasmodic complaints; externally in headache, and dropped into the meatus in ear-ache; it has also been used in burns; employed as an anæsthetic.

Dose.—Min.xx. to fl.dr.j., in water or other fluid.

Tests.—If it reddens litmus strongly, it has been improperly prepared.

Off. Prep.—*Æther Purus. Collodium. Liquor Epispasticus. Spiritus Ætheris. Tinctura Chloroformi et Morphinæ.*

ÆTHER ACETICUS. Acetic Ether. *Syn.* Acetate of Ethyl. (By adding acetate of sodium to a mixture of nearly equal parts of sulphuric acid and rectified spirit, and distilling. Water is subsequently removed by dried carbonate of potassium.)

Comp.—An ether in which one equivalent of ethyl (C_2H_5) is replaced by one of acetyl ($\text{C}_2\text{H}_3\text{O}$), the radicle of acetic acid. $\text{C}_2\text{H}_5, \text{C}_2\text{H}_3\text{O}, \text{O}.$

Prop.—Colourless liquid; odour agreeable, ethereal. Sp. gr. about $\cdot 900$. Boiling point about 166°F. ($74^{\circ}\cdot 4\text{C.}$) Soluble in ether and in rectified spirit. Also soluble in ten times its weight of water at the ordinary temperature.

Oper.—Stimulant, antispasmodic.

Use.—Like that of ether, but milder in action. It is a good solvent of cantharidin.

Dose.—Min.xx. to fl.dr.j.

Off. Prep.—*Liquor Epispasticus.*

ÆTHER PURUS. Pure Ether. Ether free from alcohol and water. (*Ætheris, Aquæ Destillatæ, ãã Oij.; Calcis recens ustæ unc.j; Calcii Chloridi unc.iv.* Wash the ether with successive portions of water, and then place it with the lime and chloride of calcium in a retort, and distil with gentle heat.)

Use.—As an anæsthetic; in the preparation of Aconitine.

Test.—Sp. gr. $0\cdot 720$.

ÆTHERIS NITROSI SPIRITUS. See *Spiritus Ætheris Nitrosi.*

ÆTHERIS SPIRITUS. See *Spiritus Ætheris.*

ALBÛMEN OVI. See *Ovi Albumen.*

ALCÔHOL AMYLICUM. Amylic Alcohol. *Syn.* Fousel Oil; Hydrate of Amyl. (An oily liquid contained in the crude spirit produced by the fermentation of saccharine solutions with yeast, and separated in the rectification or distillation of such crude spirit.)

Comp.— $\text{C}_5\text{H}_{11}\text{HO}$, with a small proportion of other spirituous substances. Sp. gr. $0\cdot 818$ when pure.

Prop.—Colourless, odour penetrating and oppressive, taste burning; sparingly soluble in water, but fully so in alcohol, ether, and essential oils.

Test.—Yields valerianic acid on oxidation by exposure to the air with platinum black.

Off. Prep.—*Amyl Nitris. Sodii Valerianas.*

ALCŌHOL ETHYLICUM. Ethylic Alcohol. *Syn.* Absolute Alcohol. (Rectified Spirit distilled with Carbonate of Potassium and Chloride of Calcium.) Sp. gr. from 0·797 to 0·800.

Comp.— C_2H_5HO .

Prop.—Odour penetrating, but not empyreumatic; taste pungent, burning; colourless; transparent; is entirely volatilised by heat; is not rendered turbid by the addition of water; it dissolves all the vegetable secretions, either wholly or partially, except gum; the addition of anhydrous sulphate of copper does not give rise to a blue colour.

Oper.—Stimulant (*powerful and diffusible*), sedative.

Use.—Scarcely ever used internally in its pure state, but often and advantageously in a highly diluted form; in cases of debility and low fevers; externally as a fomentation in muscular pains; to burns, and to restrain hæmorrhages.

Off. Prep.—*Chloroform. Liqueur Sodii Ethylatis.*

ALŌE BARBĀDENSIS. Barbadoes Aloes. (Inspissated juice from divided leaves of *Aloe vulgaris*. N.O. *Liliaceæ*. From Barbadoes and Dutch West Indian Islands.)

Comp.—Aloin, $C_{17}H_{18}O_7$, resin, gallic acid, and volatile oil.

Prop.—Deep reddish-brown, or nearly black; fracture mostly dull, sometimes smooth and glassy; powder dull olive-yellow. Odour unpleasant; taste bitter and nauseous. Moistened with rectified spirit and examined in a thin stratum under the microscope, it exhibits numerous crystals. Almost entirely soluble in proof spirit.

Oper.—Cathartic, emmenagogue, stomachic; hurtful in hæmorrhoids.

Dose.—Gr.ij. to gr.vj. The form of a pill is the most convenient mode of exhibition.

Off. Prep.—Aloin. *Enema Aloes. Ext. Aloes Barbaden. Pil. Al. Barbaden. Pil. Aloes et Ferri. Pil. Cambogiae Comp. Pil. Coloc. Co. Pil. Coloc. et Hyosc.*

ALŌE SOCOTRINA. Socotrine Aloes. (Inspissated juice from divided leaves of *Aloe Perryi*. N.O. *Liliaceæ*. Imported by way of Bombay and Zanzibar.)

Comp.—Like that of Barbadoes Aloes.

Prop.—Reddish-brown colour: fracture usually smooth and resinous; in thin films transparent and orange-red or orange-brown; powder tawny reddish-brown. Odour somewhat agreeable, taste very bitter. In microscopic characters and solubility it corresponds with Barbadoes Aloes.

Oper. & Dose.—Similar to Barbadoes Aloes.

Off. Prep.—Aloin. *Decoc. Aloes Comp. Enema Aloes. Extract. Aloes Socotrinæ. Extr. Coloc. Comp. Pil. Aloes et Asafoetidæ. Pil. Aloes et Myrrhæ. Pil. Aloes Socotrinæ. Pil. Rhei Comp. Tinct. Aloes. Tinct. Benzoini Comp. Vinum Aloes.*

ALOIN. Aloin. Extracted from aloes by solvents, and purified by recrystallisation.

Comp.—Carbon, hydrogen, and oxygen. Chemical formula, $C_{16}H_{18}O_7$.

Prop.—Tufts of yellow acicular crystals, inodorous; taste bitter, aloetic. Insoluble in ether, sparingly soluble in cold water, more so in cold rectified spirit, freely soluble in hot water and hot rectified spirit.

Oper.—Cathartic.

Use.—Like aloes, but often preferable owing to the smaller dose.

Dose.—Gr.ss. to gr.ij.

ALŪMEN. Alum.

Comp.—A sulphate of aluminium and potassium, or of aluminium and ammonium, crystallised from solution in water. Chemical formula, $\text{Al}_2(\text{SO}_4)_3, \text{K}_2\text{SO}_4, 24\text{H}_2\text{O}$, or $\text{Al}_2(\text{SO}_4)_3, (\text{NH}_4)_2\text{SO}_4, 24\text{H}_2\text{O}$.

Prop.—Crystals regular octahedrons, but generally in large white semi-transparent masses; taste sweetish, styptic; effloresces in the air; 10 or 11 parts of water at common temperatures dissolve one part of alum. Its aqueous solution gives with caustic potash or soda a white precipitate soluble in an excess of the reagent. The aqueous solution gives an immediate precipitate with chloride of barium; it does not become blue on the addition of ferrocyanide or ferricyanide of potassium.

Oper.—Tonic, astringent; and, in some instances, laxative.

Use.—In hæmorrhages, leucorrhœa, diabetes, colica pictonum, pertussis; externally in relaxation of the uvula, ophthalmia, gleet, and leucorrhœa.

Dose.—Gr.x. to gr.xx. united with an aromatic; or in whey, made with gr.xx. of the powder and Oj. of hot milk, a teacupful occasionally; in gargles gr.xxx. in fl.unc.iv. of fluid; in collyria and injections gr.xij. in fl.unc.vj. of rose-water.

Incomp.—Alkalis and their carbonates, lime, magnesia, acetate of lead, tannic acid.

Off. Prep.—*Glycerinum Aluminis*. From Potassium Alum: *Alumen Exsiccatum*.

ALŪMEN EXSICCĀTUM. Dried Alum. (Heat potassium alum in an earthen vessel over the fire, until the salt has lost from 45 to 46 per cent. of its weight, taking care that the heat does not exceed 400°F . (204°C .); and reduce to powder, and keep in a well-stoppered bottle.)

Comp.—Potassium alum, without the water of crystallisation.

Prop.—Dry, friable, white, opaque.

Oper.—Escharotic.

Use.—To destroy fungus in ulcers; internally in colic.

AMMŌNIACUM. Ammoniacum. (Gum-resin from stem of *Dorema Ammoniacum*. N.O. *Umbelliferae*. Persia and the Punjaub.)

Comp.—Gum; resin; essential oil; volatile oil 3 to 6 per cent.; proportions unknown.

Prop.—Irregular, dry masses and roundish tears, yellow externally, whitish within; odour peculiar, not ungrateful; taste nauseous, sweet and bitter; forms a white emulsion with water.

Oper.—Expectorant, antispasmodic, discutient, resolvent.

Use.—In asthma and chronic catarrh; visceral obstructions, and obstinate colic from viscid matters lodged in the intestines; externally in scirrhus tumours and white swelling of the joints.

Dose.—Gr.x. to gr.xx. in pills, with squill, myrrh, &c., or in emulsion: see *Mistura Ammoniaci*.

Off. Prep.—*Empl. Galbani*. *Empl. Ammoniaci cum Hydrargyro*. *Mistura Ammoniaci*. *Pilula Scillæ Composita*. *Pil. Ipecac. c. Scilla*.

Tests.—Coloured yellow by caustic potash; bright orange with solution of chlorinated soda.

AMMŌNĪÆ LIQUOR. See *Liquor Ammoniacæ*.

AMMŌNĪÆ LIQUOR FORTIOR. See *Liquor Ammoniacæ Fortior*.

AMMŌNĪI BENZŌAS. Benzoate of Ammonium. (Crystals prepared by the evaporation of a solution of benzoic acid in liquor ammoniacæ and distilled water.)

Comp.— $\text{NH}_4\text{C}_6\text{H}_5\text{O}_2$.

Prop.—Colourless laminar crystals, soluble in water and alcohol, and sublimed by heat; hydrochloric acid precipitates benzoic acid from the watery solution; ammonia is driven off when heated with caustic potash; persalts of iron throw down a bulky yellow precipitate.

Oper.—Diuretic, stimulant.

Use.—Chronic inflammation of the bladder, when there is a tendency to phosphatic deposits.

Dose.—Gr.x. to gr.xx.

AMMŌNII BROMĪDUM. Bromide of Ammonium. By neutralising hydrobromic acid with ammonia, evaporating and crystallising.

Comp.—Nitrogen, hydrogen, and bromine. Chemical formula, NH_4Br .

Prop.—Colourless crystals, which may become slightly yellow by exposure to the air. Pungent saline taste. Sublimed unchanged by heat. Readily soluble in water; less so in spirit. Five grs. in 1 fl.oz. of distilled water, to which 2 drops of solution of yellow chromate of potassium have been added, require not more than 514.5 and not less than 508.5 grain-measures of the volumetric solution of nitrate of silver to produce a permanent red precipitate.

Oper.—Sedative, hypnotic.

Use.—In epilepsy, tetanus, chorea, or other convulsive affections; in sleeplessness, especially when arising from overwork or business worry. Also in delirium tremens. To deaden sensibility of fauces and palate.

Dose.—Gr.ij. to gr.xx.

Tests.—With diluted sulphuric acid absence of any immediate yellow colour. An aqueous solution with mucilage of starch, and a drop of solution of bromine or chlorine, gives no blue colour, this test indicating the absence of iodine.

AMMŌNII CARBŌNAS. Carbonate of Ammonium. *Syn.* Sesquicarbonate of Ammonia. (By subliming a mixture of sulphate or chloride of ammonium and carbonate of calcium.)

Comp.— $\text{N}_3\text{H}_{11}\text{C}_2\text{O}_5$. Considered to be a compound of acid carbonate of ammonium (NH_4HCO_3) with carbamate of ammonium ($\text{NH}_4\text{NH}_2\text{CO}_2$).

Prop.—A colourless, transparent, striated, crystallised mass; odour and taste pungent and ammoniacal; turns turmeric brown; soluble in 4 pts. of water at common temperatures, more sparingly in spirit; effloresces in the air; sublimed by heat. Gives no precipitate with chloride of barium or nitrate of silver, when dilute nitric acid is added in excess; 52.3 grs. are exactly neutralised by 1000 grain-measures of the volumetric solution of oxalic acid. 20 grains of the carbonate neutralise $26\frac{3}{4}$ grains of citric acid and $28\frac{3}{4}$ grains of tartaric acid.

Oper.—Stimulant, expectorant, antacid, diaphoretic, antispasmodic, emetic.

Use.—In hysteria, dyspepsia, chronic rheumatism, typhus, atonic bronchitis; applied to the nostrils in syncope.

Incomp.—Mineral acids, alkalis and their carbonates, alum, chloride of calcium, bitartrate and bisulphate of potassium, salts of iron with exception of the potassium-tartrate, bichloride of mercury, salts of lead, sulphate of zinc.

Dose.—Gr.iiij. to gr.x.

AMMŌNII CHLORĪDUM. Chloride of Ammonium. *Syn.* Sal Ammoniac.

Comp.— NH_4Cl . It may be formed by neutralising hydrochloric acid

with ammonia or carbonate of ammonium, and evaporating to dryness, but is usually prepared by sublimation.

Prop.—Inodorous, colourless; taste acrid, pungent, bitterish, urinous: 3 pts. of cold water dissolve 1 pt.; soluble also in 4.5 pts. of alcohol; usually in the form of a hard, translucent, striated cake, sometimes in minute crystals. When heated with caustic potash its aqueous solution evolves ammonia, and forms with nitrate of silver a copious curdy precipitate. Volatilises without decomposition by heat, and leaves no residue.

Oper.—Aperient, diuretic, alterative, emmenagogue, and sedative; externally to produce cold during its solution; stimulant.

Use.—In rheumatic neuralgia; seldom used internally; externally, while dissolving, to abate the heat and pain of inflammation; to allay headache: in lotion, composed of the salt unc.j. , alcohol fl.unc.j. , water fl.unc.ix. , to indolent tumours, gangrene, scabies, and chilblains.

Dose.—Gr.v. to gr.xx.

Incomp.—Sulphuric and nitric acids, acetate of lead, carbonates of sodium and potassium, lime.

Off. Prep.—*Liquor Ammoniae fortior.* *Liq. Hydrarg. Perchlor.*

AMMŌNII NĪTRAS. Nitrate of Ammonium. (Prepared by neutralising nitric acid with solution of ammonia or carbonate of ammonium, obtaining the crystals by evaporation, and keeping them fused at a temperature not exceeding 320°F. (160°C.) until the vapour of water is no longer emitted.)

Comp.— NH_4NO_3 .

Prop.—A white deliquescent salt, in confused crystalline masses, with a bitter acrid taste; soluble in less than its own weight of water, and sparingly soluble in rectified spirit. A solution of one part in eight of distilled water gives no precipitate with nitrate of silver or chloride of barium. Heated with caustic potash it emits ammonia, and with sulphuric acid nitric acid vapour. It fuses at 320°F. (160°C.), and is entirely reduced into nitrous oxide gas and aqueous vapour at a temperature from 350°F. (176°C.) to 450°F. (232°C.)

Use.—To obtain nitrous oxide, or laughing gas, which is used in dentistry.

AMMŌNĪ OXĀLAS. Oxalate of Ammonium. (Appendix, B.P.) (The solution of oxalic acid neutralised while hot by carbonate of ammonium.)

Comp.— $(\text{NH}_4)_2\text{C}_2\text{O}_4 \cdot \text{H}_2\text{O}$.

Use.—To make the test solution.

AMMŌNII PHOSPHAS. Phosphate of Ammonium. (Crystals obtained by mixing a solution of phosphoric acid and ammonia.)

Comp.— $(\text{NH}_4)_2\text{HPO}_4$.

Prop.—Efflorescing transparent crystals, soluble in water, insoluble in rectified spirit; evolves ammonia on being heated with caustic potash; nitrate of silver throws down a canary precipitate; acidulated with hydrochloric acid, it gives no reaction with sulphuretted hydrogen. If 20 grains dissolved in water be added to a solution of ammonio-sulphate of magnesium, a crystalline precipitate falls, which, after being washed with dilute solution of ammonia, dried and heated to redness, leaves 16.8 grains.

Oper.—Diuretic, with a special power of dissolving urate of sodium.

Use.—In gouty cachexia, and where there is a tendency to the formation of uric acid in the urine.

Dose.—Gr.v. to gr.xx. freely diluted.

AMYGDALA AMARA. Bitter Almond. (*Prunus Amygdalus*, var. *amara* (Baillon). *Amygdalus communis*, var. *amara* (D.C.) N.O. *Rosaceæ*. From Mogador.)

Prop.—Broader and shorter than the sweet almond; taste bitter; and emitting a characteristic odour when moistened and rubbed.

Oper.—Sedative.

Use.—For preparing the Oleum Amygdalæ.

AMYGDALA DULCIS. Sweet Almond. (*Prunus Amygdalus*, var. *dulcis* (Baillon). *Amygdalus communis*, var. *dulcis*. N.O. *Rosaceæ*. Cultivated about Malaga. $\frac{1}{2}$)

Prop.—Taste soft and sweet: kernels flat, long, with a brownish powdery cuticle; yield by expression a sweet bland oil, used for emulsions.

Oper.—Demulcent.

Use.—In affections of the mucous membranes, especially the pulmonary and urinary; after the operation of lithotomy; and as a vehicle for more active remedies.

Off. Prep.—Oleum Amygdalæ. Mistura Amygd. Pulv. Amygd. Comp.

AMYGDALÆ OLEUM. See Oleum Amygdalæ.

AMYL NITRIS. Nitrite of Amyl. (A liquid produced by the action of nitric or nitrous acid on amylic alcohol.)

Comp.— $C_5H_{11}NO_2$ chiefly.

Prop.—Colour yellow; odour peculiar, and not disagreeable; sp. gr. about 0.880. About 70 per cent. distils between 194° and 212° F. (90° and 100° C.) Insoluble in water, soluble in rectified spirit. If it be added drop by drop to caustic potash, while fused by the application of heat, valerianate of potassium will be formed.

Oper.—Stimulant; antispasmodic; sedative. It first causes violent action of the heart, with dilatation of the capillaries, and afterwards diminished power of the heart and contraction of the extreme vessels. It is not an anæsthetic, and does not destroy consciousness except as a prelude to death.

Use.—In tetanus, angina pectoris, asthma. A patient has been restored from a state of almost hopeless syncope by its inhalation.

Dose.—By inhalation, 2 to 5 minims of the vapour; in mixtures min. ss. to min. j. To be used with caution.

AMYLUM. Starch. (*Triticum sativum*, wheat (*Triticum vulgare*); *Zea Mays*, maize; and *Oryza sativa*, rice. N.O. *Gramineæ*. Europe. ☉)

Comp.— $C_6H_{10}O_5$.

Prop.—Inodorous, insipid; in white, friable, hexagonal columnar pieces, emitting a peculiar sound when pressed; insoluble in cold water and alcohol; forming with boiling water a strong, opaline, semi-transparent jelly.

Oper.—Demulcent.

Use.—In dysentery, tenesmus, and ulceration of the rectum, in the form of clyster; it is the common vehicle for exhibiting opium per anum.

Test.—Mixed with boiling water and cooled, a blue colour is apparent on addition of iodine.

Off. Prep.—*Glycerinum Amyli. Mucilago Amyli. Pulv. Tragacanthæ Comp. Suppositoria Acidi Tannici cum Sap. Supp. Morphine cum Sap.*

ANĚTHI FRUCTUS. Dill Fruit. (*Peucedaneum graveolens* (*Anethum graveolens*). N.O. *Umbelliferae*. Cultivated in England and South of Europe. ☉)

Prop.—Seeds of a brown colour, oval, somewhat flattened, about a line and a half in length; convex on one side, concave on the other, with a pale membranous margin; odour aromatic, agreeable; taste aromatic.

Oper.—Stimulant, carminative.

Use.—In flatulent colic, and hiccough, particularly of infants.

Dose.—Gr.x. to lx.

Off. Prep.—*Aqua Anethi. Oleum Anethi.*

ANĚTHI OLĚUM. See *Oleum Anethi*.

ANĚSI FRUCTUS. Anise Fruit. (*Pimpinella Anisum*. N.O. *Umbelliferae*. ☉)

Prop.—Odour aromatic; taste sweetish, warm, spicy. Figure oblong-ovate. $\frac{1}{2}$ in. in length, except the Russian variety, which is shorter.

Oper.—Carminative.

Use.—In dyspepsia, and the tormina of infants.

Dose.—Gr.x. to lx. bruised.

Off. Prep.—*Aqua Anisi. Oleum Anisi.*

ANĚSI OLĚUM. See *Oleum Anisi*.

ANĚSI STELLATI FRUCTUS. Star-Anise Fruit. (*Illicium Anisatum*. N.O. *Magnoliaceae*. From China. ♀)

Prop.—Eight carpels diverging horizontally in a stellate manner, each boat-shaped, and a single shining reddish-brown seed.

Oper.—Carminative.

Off. Prep.—*Oleum Anisi.*

ANTHEMĚDIS FLĚRES. Chamomile Flowers. (*Anthemis nobilis*, Common Chamomile. N.O. *Compositae*. Indigenous, cultivated. ♀)

Prop.—Odour powerful, fragrant, grateful; taste bitter, warm: these properties reside in the disc of the flower. The active properties depend on essential volatile oil and bitter extractive.

Oper.—Tonic, stomachic; the warm infusion is emetic; externally discutient, emollient, antiperiodic.

Use.—In intermittents, dyspepsia, hysteria, flatulent colic, gout; to promote the operation of emetics; externally as fomentations in gripings, and to ripen suppurating tumours.

Dose.—In powder gr.x. to gr.xxx.

Off. Prep.—*Extr. Anthemidis. Infusum Anthemidis. Ol. Anthemidis.*

ANTHEMĚDIS OLĚUM. See *Oleum Anthemidis*.

ANTIMĚNII OXĚDUM. Oxide of Antimony. (*Liquoris Antimonii Chloridi fl.unc.xvj.*; *Sodii Carbonatis unc.vj.*; *Aque cong.ij.*; *Aque Destillatæ q.s.* Pour the antimonial solution into the water, and having stirred the mixture well, set it by until the white precipitate which forms has subsided. Decant off the supernatant liquor. Agitate the sediment with a gallon of distilled water, and allow the whole to stand until the oxide has fallen to the bottom. To the precipitate now add the carbonate of sodium, dissolved in 2 pints of distilled water, and leave them in contact for half an hour, stirring frequently; collect the deposit on a calico filter and wash with boil-

ing distilled water, until the washings cease to give a precipitate with a solution of nitrate of silver acidulated with nitric acid. Lastly, dry the product at a heat not exceeding 212° F. (100° C.)

Comp.— Sb_2O_3 .

Prop.—Greyish-white powder, fusible at a low red heat; insoluble in water, but readily dissolved by hydrochloric acid. The solution dropped into distilled water gives a white deposit, at once changed to orange by sulphuretted hydrogen. It dissolves entirely when boiled with an excess of acid tartrate of potassium.

Oper.—Diaphoretic, expectorant, emetic.

Use.—In pyrexia; but seldom used except in the preparation of tartar emetic.

Dose.—Gr.j. to gr.iv.

Off. Prep.—*Antimonium Tartaratum. Pulvis Antimonialis.*

ANTIMŌNĪI CHLORĪDI LIQUOR. See *Liquor Antimonii Chloridi*.

ANTIMŌNIUM NĪGRUM PURIFICATUM. Purified Black Antimony.

Native Sulphide of Antimony, purified from siliceous matter by fusion, reduced to fine powder, and if, on testing a solution in hydrochloric acid with copper foil, arsenic is found to be present, the antimony is further purified by maceration and washing with ammonia.

Comp.— Sb_2S_3 .

Prop.—A greyish-black crystalline powder, almost entirely soluble in boiling hydrochloric acid with evolution of sulphuretted hydrogen; this solution gives a white precipitate when poured into water.

Use.—In the preparation of *Antimonium Sulphuratum* and *Liquor Antimonii Chloridi*.

ANTIMŌNIUM SULPHURĀTUM. Sulphurated Antimony.

Comp.—Sulphide of antimony (Sb_2S_3), with a small and variable amount of oxide of antimony (Sb_2O_3).

Prop.—Powder of an orange colour, insoluble in cold water, but soluble in caustic soda, and also in hydrochloric acid.

Oper.—Emetic, diaphoretic, cathartic, according to the extent of the dose; alterative; used, now, only for forming Plummer's pill.

Use.—In chronic rheumatism and obstinate eruptions. Seldom ordered.

Dose.—Gr.j. to gr.v. twice or thrice a day in a pill.

Off. Prep.—*Pil. Hydrarg. Subchlor. Co.*

Test.—Totally soluble in hydrochloric acid, with the emission of fumes of hydrosulphuric acid, and the separation of a little sulphur. When boiled in water with acid tartrate of potassium, an orange precipitate falls on addition of sulphuretted hydrogen. Sixty grains moistened and warmed with successive portions of nitric acid until red fumes cease to be evolved, and then dried and heated to redness, give a white residue weighing about 40 grains.

ANTIMŌNIUM TARTARĀTUM. Tartarated Antimony. *Syn.* Antimonii Potassio-tartras. Antimonium Tartarizatum. Tartar Emetic. (First form a paste by mixing 5 ounces of the oxide of antimony and 6 ounces of the acid tartrate of potassium in fine powder with a little water, and let it remain for 24 hours; then, having stirred well with what remains of the 2 pints of water first ordered, filter, and allow the clear filtrate to crystallise.)

Comp.—Oxytartrate of antimony and potassium, $(\text{KSbOC}_4\text{H}_4\text{O}_6)_2 \cdot \text{H}_2\text{O}$.

Prop.—In colourless transparent crystals exhibiting triangular facets; but, as it effloresces, it appears generally as a white powder; taste styptic and metallic; 1 fl.oz. of water at 60° F. (15° C.) dissolves

29 gr. This solution gives an orange precipitate with sulphuretted hydrogen, which, when dried, weighs 15.1 grains. It should always be dissolved in distilled water to prove emetic. It is insoluble in alcohol. Neither chloride of barium nor nitrate of silver gives a precipitate, or only what is soluble in water. A precipitate is given by nitric acid, but soluble in excess of acid.

Oper.—Emetic, sometimes cathartic, diaphoretic, expectorant, alterative, depressant, rubefacient.

Use.—In the beginning of fever, to clear the stomach and bowels; but it is an improper emetic in advanced stages of typhus; in large doses in pneumonic inflammations as a depressant; and in small as an alterative in cutaneous diseases; externally in the chronic stage of internal inflammations, and in affections of the joints, &c.

Dose.—As an emetic, gr.j. to gr.ij. in solution; diaphoretic and expectorant, gr. $\frac{1}{16}$ to $\frac{1}{2}$.

Incomp.—Alkalis and earths with their carbonates; strong acids; hydrosulphides; solution of lime, chloride of calcium, salts of lead; decoctions of bitter and astringent plants.

Off. Prep.—*Vinum Antimoniale. Ung. Antimonii Tartarati.*

Test.—Solubility complete in a moderate quantity of water. Hydro-sulphuric acid, into which one or two of the crystals may be dropped, should form an orange colour on them. Neither chloride of barium nor nitrate of silver should cause a precipitate.

APŌMORPHINÆHYDROCHLORAS. Hydrochlorate of Apomorphine. The hydrochlorate of an alkaloid, obtained by heating morphine or codeine in sealed tubes with hydrochloric acid.

Comp.— $C_{17}H_{17}NO_2.HCl$.

Prop.—Small acicular crystals, greyish white, turning green on exposure to light and air; inodorous, faintly acid. Soluble in water, sparingly in alcohol; from solutions, bicarbonate of sodium throws down a precipitate which becomes green on standing, and then forms a purple solution with ether, violet with chloroform, and bluish-green with alcohol.

Oper.—Emetic and expectorant.

Use.—In catarrh, bronchitis, and asthma. Mostly employed hypodermically.

Off. Prep.—*Injectio Apomorphinæ Hypodermica.*

AQUA. Water. Natural water, H_2O , the purest that can be obtained, cleared if necessary by filtration.

Test.—Free from odour, taste, and visible impurity.

AQUA ANĒTHI. Dill Water. (Properties, &c., the same as those of the fruit.)

AQUA ANĪSI. Anise Water. (Properties, &c., the same as those of the fruit.)

AQUA AURANTĪI FLŌRIS. Orange-flower Water. The distilled water of the flowers of the bitter orange tree, *Citrus vulgaris* (*Citrus Bigaradia*); and of the sweet orange, *Citrus Aurantium*—prepared mostly in France.

Use.—To flavour medicine, and to prepare Syrupus Aurantii Floris.

Test.—Not coloured by sulphuretted hydrogen.

AQUA CAMPHŌRÆ. Camphor Water. *Syn.* Mistura Camphoræ. (Camphor broken in pieces, and enclosed in a muslin bag, and placed in water for two days.)

Oper.—The same as camphor, only in a weaker degree.

Use.—In faintings, typhus and nervous fevers, but seldom given alone.

Dose.—Fl.unc.j. to fl.unc.ij., combined with cordial tinctures.

AQUA CARŪI. Caraway Water. (Properties, &c., the same as those of the fruit.)

AQUA CHLOROFORMI. Chloroform Water. (*Chloroformi* fl.dr.j.; *Aquæ Destillatæ* fl.unc.xxv., in a stoppered bottle capable of holding two pints. Shake them together until the chloroform is entirely dissolved in the water.)

Comp.—Chloroform dissolved in water.

Prop.—Stimulant; antispasmodic; sedative.

Use.—As a vehicle for other medicines, in cases in which there is spasm either affecting lungs or bowels, or failure of heart's action.

Dose.—Fl.unc.ss. to fl.unc.ij.

AQUA CINNAMŌMI. Cinnamon Water. (Properties, &c., the same as those of the fruit.)

AQUA DESTILLĀTA. Distilled Water. (Although this is very generally ordered in extemporaneous prescriptions, yet it is scarcely ever used; but it is nevertheless absolutely necessary when the following and many other articles are ordered: *Acidum Citricum*, *Argenti Nitras*, *Antimonium Tartaratum*, *Ferrum Tartaratum*, *Hydrargyri Subchloridum*, *Liquor Ammoniacæ*, *Liquor Plumbi Subacetatis*, *Liquor Potassæ*, *Plumbi Acetas*, *Vinum Ferri*, *Zinci Sulphas*, et *præparationes variae*.) Chemical formula, H_2O .

Test.—An ounce evaporated in a clean glass capsule leaves scarcely any visible residue. It is not affected by sulphuretted hydrogen, oxalate of ammonium, nitrate of silver, chloride of barium, or solution of lime.

AQUA FŒNICULI. Fennel Water. (Properties, &c., the same as those of the fruit.)

AQUA LAURŒCERĀSI. Cherry-laurel Water. (*Laurocerasi Foliorum recent.* lb.j.; *Aquæ Oijss.* Let the leaves be chopped, crushed in a mortar, and macerated in water for 24 hours; then distil one pint of liquid. Shake the product, filter through paper, and add hydrocyanic acid or distilled water, so that 810 grains of the solution shall be neutralised by 150 grain-measures of the volumetric solution of nitrate of silver, corresponding to 0.1 per cent. of real hydrocyanic acid.)

Prop.—Taste and odour resembling those of bitter almonds and hydrocyanic acid.

Oper.—Sedative.

Use.—In spasmodic affections and dyspepsia.

Dose.—From fl.dr.ss. to fl.dr.ij.

AQUA MENTHÆ PIPERITÆ. Peppermint Water.

AQUA MENTHÆ VIRĪDIS. Spearmint Water.

AQUA PIMENTÆ. Pimento Water.

AQUA ROSÆ. Rose Water.

AQUA SAMBŪCI. Elder-flower Water.

These waters, which contain a small portion of the essential oil of the plants in solution, are used chiefly as vehicles for more active medicines; in doses of fl.unc.j. to fl.unc.ijj.

ARGENTI ET POTASSII NĪTRAS. Nitrate of Silver and Potassium.

Syn. Mitigated Caustic.

Comp.—Nitrate of silver unc.j., nitrate of potassium unc.ij., fused and mixed.

Prop.—White or greyish-white cylindrical rods or cones.

Oper.—Caustic.

Use.—Employed externally, like nitrate of silver, but less active.

ARGENTI NĪTRAS. Nitrate of Silver. *Syn.* Lunar Caustic.

Comp.— AgNO_3 .

Prop.—Taste styptic, austere, bitter; decomposes animal matter. In colourless tabular crystals, the primary form of which is the right rhombic prism, or in little cylindrical pieces of a dull-white colour; fracture radiated; reduced by light; soluble in water, also in alcohol. Solution of chloride of sodium throws down a white curdy precipitate (chloride of silver), which becomes black on exposure to a strong light, and is soluble in ammonia. A small fragment heated on charcoal with the blowpipe melts, then deflagrates, leaving behind a dull-white metallic coating. Ten grains dissolved in two drachms of distilled water give with hydrochloric acid a precipitate, which when washed and thoroughly dried weighs 8.44 grs. The filtrate when evaporated by a water-bath leaves no residue.

Oper.—Tonic, antispasmodic, escharotic.

Use.—In chorea and epilepsy; locally in ophthalmia, follicular affections of the throat, laryngitis, and to relieve strictures; to fungous ulcers, warts, and venereal chancres; gr.ij. in distilled water fl.unc.j. is a good injection in fistulous sores; and as an application to spongy gums. A solution of gr.xxx. in fl.unc.j. of distilled water, highly useful when pencilled over the surface in erysipelas. Solutions of gr.xx., gr.xl., or gr.lx. to the fl.unc.j. of distilled water have been recommended to be locally applied by means of a sponge on a curved whalebone rod in affections of the larynx; also in follicular disease of throat.

Dose.—Gr. $\frac{1}{2}$, increased to gr. $\frac{3}{4}$, in a pi'l, with a crumb of bread, three times a day; or in solution. The dark colour communicated to the skin of some individuals is an objection to its internal employment, but this may sometimes be prevented by the administration of diluted nitric acid.

Off. Prep.—*Argenti Oxidum.* *Argenti et Potassii Nitras.*

Incomp.—Sulphuric, hydrochloric, and arsenious acids and their salts; alkalies, except ammonia; lime; chlorides; sulphides; astringent vegetable infusions and decoctions; aqueous solutions of salts of mercury or of copper.

ARGENTI OXĪDUM. Oxide of Silver. (*Argenti Nitrat.* unc.ss.; *Liquor. Calcis* cong.ijss.; *Aquæ Destillatæ* fl.unc.x. Dissolve the nitrate in 4 ounces of water, and having poured the solution into a bottle containing solution of lime, shake it well, and set it by till the sediment subsides. Then place it (the sediment) on a filter, and wash with the remainder of the water. Dry it at a heat not exceeding 212°F . (100°C .)

Comp.— Ag_2O .

Prop.—Olive-brown powder, becoming darker when dried, inodorous, and tasteless, insoluble in water, but soluble in ammonia and nitric acid, decomposed by heat and light. 29 grains heated to redness leave 27 grains of metallic silver.

Oper.—Tonic and astringent.

Use.—In menorrhagia, gastrodynia, and states of debility, as an application to the urethra in gonorrhœa.

Dose.—Gr.ss. to gr.ij. in pill; as an ointment dr.j. to unc.ij. of lard.

ARGENTUM PURIFICATUM. Refined Silver.

Test.—If ammonia be added in excess to a solution of the metal in nitric acid, the resulting fluid is clear and colourless.

Off. Prep.—*Argenti Nitræs.*

ARMORACIÆ RADIX. Horseradish Root. (*Cochlearia Armoracia*, Horseradish. N.O. *Cruciferae*. (*Brassicaceæ*, Lindley.) Indigenous. $\mathcal{U}$)

Prop.—A long, cylindrical, fleshy root, half an inch to an inch in diameter, expanding at the crown into several very short stems; the section of the root is white; odour pungent; dependent on volatile oil (C_3H_5CNS), identical with the oil of mustard; taste sweetish, biting, acrid; lost in drying.

Oper.—Stimulant, sudorific, diuretic.

Use.—In scurvy, rheumatism, dropsy; and locally in hoarseness.

Dose.—Gr.xx. to gr.lx. Of the following syrup a teaspoonful often, slowly swallowed, in hoarseness:— $\mathcal{R}$ of the scraped root gr.lx., boiling water fl.unc.ij., sugar q.s. to the strained liquor.

Off. Prep.—*Spir. Armor. Comp.*

ARNICÆ RHIZOMA. Arnica Rhizome. (The dried rhizome and rootlets of *Arnica montana*. N.O. *Compositæ*. Mountainous parts of Europe. $\mathcal{U}$)

Prop.—Rhizome from one to three inches long, and two to three lines thick, cylindrical, contorted, rough from the scars of the coriaceous leaves, and furnished with numerous long slender fibres; peculiar odour, exciting sneezing; active properties taken up by water; contains a volatile oil, a bitter principle identical with cytisin, and a volatile alkaloid, resembling lobeline.

Oper.—Stimulant and irritant, supposed to affect the spinal cord.

Use.—As an external application in bruises and sprains.

Off. Prep.—*Tinctura Arnicæ.*

ARSENII IODIDUM. Iodide of Arsenic. (By direct combination of iodine and arsenic or by evaporating an aqueous mixture of arsenious and hydriodic acids.)

Comp.— AsI_3 .

Prop.—Small orange-coloured crystals, soluble in water and in rectified spirit. Solution gives a yellow precipitate with sulphuretted hydrogen. Volatilises with heat, violet vapours of iodine being set free.

Oper.—Alterative and tonic.

Use.—In skin diseases.

Dose.—Gr. $\frac{3}{50}$ in a pill.

Off. Prep.—*Liq. Arsenii et Hydrargyri Iodidi.*

ASAFŒTIDA. Asafoetida. (*Ferula Narthex* (*Narthex Asafoetida*), *Ferula Scorodosma*, and probably other species. N.O. *Umbelliferae*. (*Apiaceæ*, Lindley.) Affghanistan and the Punjab. $\mathcal{U}$)

Comp.—Gum 25, resin 65.0, essential oil 4, parts in 100.

Prop.—In masses of a whitish or reddish and violet hue, adhering together; odour foetid and alliaceous; taste bitter and subacrid; forms an emulsion with water; almost entirely soluble in rectified

spirit. The freshly fractured surface of a tear when touched with nitric acid assumes a fine green colour for a short time.

Oper.—Antispasmodic, expectorant; emmenagogue; anthelmintic when injected into the rectum.

Use.—Hysteria, tympanites, asthma, dyspnoea, pertussis, worms.

Dose.—In pill gr.v. to gr.xx.; in clyster gr.cxx. dissolved in water fl.unc.viij.

Off. Prep.—*Enema Asafoetidæ. Pil. Aloes et Asafoetidæ. Pil. Asafoetidæ Comp. Spir. Ammoniacæ Fœtidus. Tinct. Asafoetidæ.*

ATRÖPĪNA. Atropine. An alkaloid, the active principle of the *Atropa Belladonna*. $C_{17}H_{23}NO_3$.

Prop.—White transparent acicular crystals of silky lustre, inodorous, nauseously bitter and acrid. Soluble in 500 parts of cold water, the solution having a bitter taste and an alkaline reaction; very soluble in alcohol and ether. Leaves no ash when burned with free access of air. Combines with acids to form salts. Perchloride of gold throws down a citron-yellow precipitate from the aqueous solution. It is an active poison.

Oper.—Anodyne, sedative, narcotic, dilating pupil.

Use.—Employed in the preparation of two official compounds; on account of its poisonous properties it should not be used internally.

Off. Prep.—*Atropinæ Sulphas. Unguentum Atropinæ.*

ATROPĪNÆ SULPHAS. Sulphate of Atropine. (*Atropinæ* gr.cxx.; *Aquæ Destillatæ* fl.dr.iv.; *Acidi Sulphurici Diluti* q.s. Add the acid gradually to the atropine mixed with the water, until the solution is complete but neutral. Evaporate to dryness at a temperature not exceeding 100° F. (37° 8 C.))

Prop.—A colourless powder, soluble in water; the solution being neutral and acting on the pupil as atropine. It leaves no ash when burned with free access of air.

Oper.—Anodyne, sedative, narcotic, dilating the pupil. Less irritating than the uncombined alkaloid.

Use.—In the preparation of the *Liquor Atropinæ Sulphatis*, and of the *Lamellæ Atropinæ*.

AURANTĪI CORTEX. Bitter-Orange Peel. (The dried outer part of the rind of the bitter orange, *Citrus vulgaris* (*Citrus Bigaradia*). N.O. *Aurantiaceæ*. South of Europe. $\mathfrak{L}$)

Prop.—In thin pieces or curled strips, taste aromatic, bitter; unripe fruit more bitter, but less aromatic.

Oper.—The rind and immature fruit, tonic, carminative.

Use.—The rind and immature fruit in dyspepsia, particularly that of drunkards; often employed solely on account of its flavour.

Dose.—Of the rind, &c., vide official preparations.

Off. Prep.—*Infusum Aurantii. Inf. Aurantii Comp. Infus. Gentianæ Comp. Tinct. Aurantii. Tinct. Cinchonæ Comp. Tinct. Gentianæ Comp. Spiritus Armoraciæ Comp.*

AURANTĪI FRUCTUS. Bitter Orange. (Ripe fruit of *Citrus vulgaris* (*Citrus Bigaradia*). N.O. *Aurantiaceæ*. South of Europe.)

Prop.—Globular, compressed at the two ends; the pericarp of a dark orange-yellow colour, peculiar fragrant odour, and warm bitter taste, dependent on the volatile oil which exists in the concave minute vesicles. It yields its aroma and taste to both water and alcohol.

Oper.—Tonic ; carminative ; astringent.

Use.—In dyspepsia.

Off. Prep.—*Tinctura Aurantii Recentis*.

AURUM. Gold. (Appendix, B.P.) Chemical symbol, Au. Eq. 196·5. Employed in chemical analysis.

Oper.—Similar to that of mercury.

Use.—In preparation of the solution of perchloride of gold (Appendix, B.P.), which gives yellow plumose crystals with atropine.

AXUNGIA. See *Adeps*.

BALSĀMUM CANĀDENSE. See *Terebinthina canadensis*.

BALSĀMUM PERUVIĀNUM. Balsam of Peru. (*Myroxylon Pereiræ* (*Toluifera Balsamum*). N. O. *Leguminosæ*. It exudes from the trunk of the tree after the bark has been scorched and removed. Salvador in Central America. *℞*)

Comp.—Resin, volatile oil, styracin or metacinnamein ($C_{18}H_{16}O_2$); styrene or Peruvine ($C_9H_{10}O$).

Prop.—Odour fragrant and aromatic, taste hot and bitter, consistence that of honey, colour reddish brown, soluble in rectified spirit and in chloroform, miscible in water by means of mucilage.

Oper.—Stimulant, tonic, expectorant.

Use.—In chronic asthma, bronchitis, and rheumatism ; gleet ; leucorrhœa ; and externally for cleansing and stimulating foul, indolent ulcers.

Dose.—Min.x. to min.xv. twice or thrice a day, made into an emulsion with mucilage of gum.

BALSĀMUM TOLUTĀNUM. Balsam of Tolu. (It exudes from the trunk of the *Myroxylon Toluifera* after incisions have been made into the bark. New Granada.)

Comp.—The same as that of Balsam of Peru.

Prop.—Soft and tenacious when first imported, hard and brittle on keeping ; odour very fragrant ; taste warm, sweetish, communicated to boiling water, soluble in rectified spirit ; colour yellowish brown.

Oper.—Stimulant, expectorant.

Use.—In chronic coughs ; but principally used on account of its flavour.

Dose.—Gr.x. to gr.xx., triturated with mucilage.

Off. Prep.—*Syrupus Tolutanus*. *Tinct. Benzoini Comp.* *Tinct. Tolutana*. *Pilula Phosphori*.

BARĪI CHLORĪDI LIQUOR. Solution of Chloride of Barium. (Appendix, B.P.) (*Barii Chloridi* unc.j.; *Aquæ Destillatæ* unc.x. Dissolve the salt in the water, and filter through paper.)

Use.—As a test for detecting sulphuric acid and the sulphates.

BARĪI CHLORĪDUM. Chloride of Barium from the Carbonate. (Appendix, B.P.)

Comp.— $BaCl_2 \cdot 2H_2O$.

Prop.—Inodorous ; taste bitter, disagreeable ; crystals colourless, permanent tables ; soluble in three parts of water, scarcely at all in alcohol.

Use.—For making the solution.

BĒBERINÆ SULPHAS. Sulphate of Beberine. The sulphate of an alkaloid prepared from *Nectandra* or *Bebeeru Bark*. The sulphate is

prepared by the action of dilute sulphuric acid on the bebeeru bark; slaked lime is then added to separate the colouring and other matters. Ammonia is then added, and the precipitate collected and dried, and treated with dilute sulphuric acid. It is then evaporated to dryness, and the sulphate of beberine dissolved out by cold water.

Comp.—Probably a mixture of sulphates of beberine ($C_{36}H_{42}N_2O_6$), nectandrine ($C_{40}H_{46}N_2O_8$), and other alkaloids.

Prop.—In dark brown thin translucent scales, yellow when in powder, inodorous, with a strong bitter taste; soluble in water slightly acidulated with sulphuric acid, and alcohol; the aqueous solution gives a white precipitate with chloride of barium, with caustic soda a yellowish-white precipitate, soluble by agitation in double its volume of ether. Entirely destroyed by heat.

Oper.—Tonic, antiperiodic, antispasmodic.

Use.—In neuralgia, debility, and periodic affections.

Dose.—Gr. j. to gr. v. three times a day.

BĒLĒ FRUCTUS. Bael Fruit. Half-ripe fruit, dried. (*Ægle Marmelos*, N.O. *Aurantiaceæ*, Malabar and Coromandel.)

Comp.—An astringent principle, more or less allied to tannic acid.

Prop.—Fruit roundish, about the size of a large orange, with hard woody rind; usually imported in dried slices, or in fragments consisting of portions of the rind and adherent dried pulp and seeds. Rind about a line and a half thick, covered with small pale-brown or greyish epidermis, and internally, as well as the dried pulp, brownish orange or cherry-red. The moistened pulp is mucilaginous, and very slightly acid.

Oper.—Astringent, and in some degree sedative to the intestinal mucous membrane.

Use.—In dysentery and diarrhœa, and atonic conditions of the intestinal mucous membrane.

Dose.—See *Extractum Belæ Liquidum*.

BELLADONNÆ FOLIA. RADIX. The fresh Leaves and Root of Deadly Nightshade. (*Atropa Belladonna*, N.O. *Solanaceæ*. Indigenous, and imported from Germany. 2f)

Comp.—Albumen, salts of potassium, and a narcotic principle, which is an alkaloid that has been named *Atropine*: its crystals are acicular, white, shining, tasteless, and scarcely soluble in water.

Prop.—Odour slightly narcotic, taste subacid, bitter, nauseous; does not lose its activity by drying.

Oper.—Powerfully narcotic, diaphoretic, diuretic; causes dilatation of pupil.

Use.—In obstinate intermittents, neuralgia, spasmodic affections, tic douloureux, palsy, epilepsy, pertussis, and the cachexiæ; amaurosis; dysmenorrhœa;—sprinkling the powdered leaves over cancerous sores has been found to allay the pain; and the leaves form a good poultice. The root is used for the same purpose as the leaves.

Dose.—Gr. $\frac{1}{3}$ gradually increased to gr. ij. or iij. daily; or flunc. ij. of this infusion:—R of the leaves gr. xx., hot water flunc. x., strained cold.

Off. Prep.—From the leaves: *Extractum Belladonnæ*. *Succus Belladonnæ*. *Tinctura Belladonnæ*. From the root: *Atropina*. *Linimentum Belladonnæ*. *Ext. Belladonnæ Alcoholicum*.

In poisoning with Belladonna, stimulating emetics, followed by active cathartics, should be employed with cold applications to the head;

and if coma be present, ammonia and external stimulants. After the stomach has been freely evacuated, the deleterious effects are best counteracted by vinegar.

BENZOÏNUM. Benzoin. (*Styrax Benzoin*. N.O. *Styracaceæ* (Lindley). A balsamic resin procured by making incisions into the bark of the tree. Imported from Siam and Sumatra. H_2)

Comp.—Benzoic acid, cinnamic acid, four different resins, and a trace of volatile oil.

Prop.—Odour fragrant, taste slightly aromatic; in masses composed of white and brown pieces; volatile; soluble in alcohol and ether and solution of potash.

Use.—Principally for obtaining the acid it contains.

Incomp.—Alkalis, acids; and so with all the balsams.

Off. Prep.—*Acidum Benzoicum*. *Adeps Benzoatus*. *Tinct. Benzoini Comp.* *Unguentum Cetacei*.

BENZOL. (Appendix, B.P.)

Comp.—Mainly C_6H_6 .

Use.—As a solvent, and in the preparation of Benzolated Amylic Alcohol.

BENZOLATED AMYLIC ALCOHOL. (Appendix, B.P.) Prepared by mixing together three volumes of benzol and one of amylic alcohol, and decanting the supernatant fluid.

Use.—In estimating the amount of total alkaloids present in red cinchona bark.

BISMŪTHI CARBŌNAS. Carbonate of Bismuth. (*Bismuthi Purificati* unc.ij.; *Acidi Nitrici* fl.unc.iv.; *Ammonii Carbonatis* unc.vj.; *Aque Destillatæ* q.s.) Dissolve the bismuth in the acid, heat the solution, and then, having evaporated it, add it gradually to a cold filtered solution of the carbonate of ammonium. Collect the precipitate and dry it at a temperature not exceeding 150°F . (65°C .)

Comp.— $(\text{Bi}_2\text{O}_3\text{CO}_3)_2, \text{H}_2\text{O}$.

Prop.—A white powder, blackened by sulphuretted hydrogen, insoluble in water, effervesces with nitric acid. When added to sulphuric acid coloured with sulphate of indigo, the colour of the latter is not discharged. The solution in nitric acid gives no precipitate with diluted sulphuric acid, nor with solution of nitrate of silver.

Oper.—Sedative, tonic.

Use.—In dyspepsia attended with cardialgia; pyrosis; colliquative diarrhoea of phthisis. More easily borne by the stomach than the nitrate.

Dose.—Gr.v. to gr.xx.

BISMŪTHI CĪTRAS. Citrate of Bismuth. (*Bismuthi Subnitratiss* unc.vss.; *Acidi Nitrici* q.s.; *Acidi Citrici* unc.iv.; *Sodii Bicarbonat.* unc.viij.; *Aq. Destillatæ* q.s. Dissolve the subnitrate in nitric acid; pour in water with constant stirring, until a slight permanent cloudiness is produced. Dissolve the bicarbonate of sodium in distilled water, and add citric acid. After effervescence mix and boil the solutions with constant stirrings, collect and dry the precipitate.)

Comp.— $\text{BiC}_6\text{H}_5\text{O}_7$.

Prop.—White powder, soluble in ammonia, the solution giving a black

precipitate with sulphuretted hydrogen. Chars with strong heat, leaving a black residue with a yellow surface soluble in nitric acid.

Oper.—Gastric sedative.

Uses.—In pyrosis and other gastric affections.

Dose.—Gr.ij. to gr.v.

Off. Prep.—*Liquor Bismuthi et Ammonii Citratis.*

BISMŪTHI ET AMMŌNĪI CITRAS. Citrate of Bismuth and Ammonium. (By careful evaporation of solution of citrate of bismuth and ammonium.)

Prop.—Small, shining, translucent scales, soluble in water, yielding ammonia when warmed with solution of a fixed alkali.

Oper. & Use.—Similar to those of other preparations of bismuth, but having the advantage of being soluble in water.

Dose.—Gr.ij. to gr.v.

BISMŪTHI OXĪDUM. Oxide of Bismuth. (*Bismuthi Subnitratiss* lb.j.; *Liquoris Sodæ* Oiv. Boil the mixture for 5 minutes, then wash thoroughly the oxide, which subsides on cooling, with distilled water, and finally dry it by the heat of a water bath.)

Comp.— Bi_2O_3 .

Prop.—Powder of a dull yellow colour; insoluble in water, but soluble in nitric acid mixed with half its volume of water; and if it be thus dissolved to saturation, the solution, mixed with 10 or 20 times its volume of water, yields a white precipitate. Neither dilute sulphuric acid nor solution of nitrate of silver gives any precipitate when dropped into the nitric acid solution. Chloride of ammonium gives a white precipitate, which, being treated with solution of ammonia in excess and then filtered and the clear filtrate neutralised with hydrochloric acid, will not become turbid.

Oper.—Tonic; astringent; and a stomachic sedative.

Use.—In dyspepsia; pyrosis; phthisical diarrhœa.

Dose.—Gr.v. to gr.xv.

BISMŪTHI SUBNĪTRAS. Subnitrate of Bismuth. *Syn.* Bismuthum Album; Oxynitrate of Bismuth. (*Bismuthi* unc.ij.; *Acidi Nitrici* unc.iv.; *Aquæ Destillatæ* q.s.) Mix the water with the acid, add the bismuth, and, effervescence having ceased, apply for 10 minutes heat approaching ebullition. Then add the rest of the water and strain; set aside the mixture till the powder subsides. Wash it with distilled water, and dry at a temperature not exceeding 150°F. (65°·5 C.)

Comp.— $\text{BiO}, \text{NO}_3, \text{H}_2\text{O}$.

Prop.—A white, inodorous, tasteless powder; insoluble in water, soluble in nitric acid without effervescence.

Oper.—Tonic, antispasmodic.

Use.—In dyspepsia attended with cardialgia; colliquative diarrhœa of phthisis.

Dose.—From gr.v. to gr.xx.

Off. Prep.—*Trochisci Bismuthi.*

BISMŪTHUM. Bismuth. (Chemical symbol, Bi. Eq. 210.)

Prop.—In spicular plates of a reddish-white colour, considerable lustre, pulverisable, moderately hard; sp. gr. 9·8; fusible at 400° F. (204°·5 C.); volatile in a high temperature. It has a sensible odour and taste.

Use.—For preparing the Bismuthum Purificatum.

BISMŪTHUM PURĪFICĀTUM. Purified Bismuth. (*Bismuthi* unc.x;

Potassii Cyanidi unc.ss.; *Sulphur.* gr.lxxx.; *Potassii Carb. et Sodii Carb.* ãã q.s.) Melt the bismuth; add the cyanide of potassium and sulphur; heat, stir, and remove the bismuth; subsequently heat it to bright redness with the carbonates of potassium and sodium, and pour it into suitable moulds.

Use.—In the preparation of the Carbonate and Subnitrate of Bismuth.

BORAX. *Borax.* *Syn.* Sodæ Biboras. A native salt; it is also made by neutralising boric acid with carbonate of sodium.

Comp.— $\text{Na}_2\text{B}_4\text{O}_{10} \cdot 10\text{H}_2\text{O}$.

Prop.—Inodorous, taste cooling, slightly efflorescent, in transparent colourless crystals, insoluble in rectified spirit, soluble in water. A concentrated solution treated with sulphuric acid deposits scaly colourless crystals of boric acid, the solution of which in alcohol burns with a green flame. 191 gr. dissolved in 10 ounces of distilled water require for saturation 1000 grain-measures of the volumetric solution of oxalic acid.

Oper.—Antacid, diuretic, detergent, emmenagogue.

Use.—In aphthous affections, it is administered internally; and also in gastric irritation. As a gargle in aphthæ, and in salivation. As a diuretic in cases of uric acid calculus.

Dose.—Gr.v. to gr.xl. or unc.j. to fl.unc.v. of water as a lotion or gargle.

Off. Prep.—*Glycerinum Boracis.* *Mel Boracis.*

BRŌMUM. Bromine. Chemical symbol, Br. Eq. 80. (Prepared from bittern.)

Prop.—A liquid, by reflected light dark brownish-red, by transmitted hyacinth-red; odour and taste acrid; volatile; sp. gr. 2.97 to 3.14.

Use.—Test solution.

Off. Prep.—*Acidum Hydrobromicum Dilutum.* *Ammonii Bromidum.* *Potassii Bromidum.* *Sodii Bromidum.*

BUCHU FOLĪA. Buchu Leaves. (Dried leaves of the *Barosma betulina*, *crenulata*, and *serratifolia*. N.O. *Rutaceæ*. Cape of Good Hope. ㄥ)

Prop.—Taste warm and camphoraceous; odour aromatic. The dried leaves are stiff, of a yellow olive hue on the upper surface, pale and rugose on the lower; smooth, serrate, dentate or crenate; studded with glands.

Comp.—Volatile oil and bitter extractive matter.

Oper.—Sudorific, tonic, diuretic.

Use.—In rheumatism, gout, and catarrhal affections, especially of the vesical mucous membrane.

Off. Prep.—*Infusum Buchu.* *Tinct. Buchu.*

BÜTYL-CHLORAL HYDRAS. Hydrate of Butyl-Chloral. Croton-Chloral Hydrate, wrongly so called. (By the action of dry chlorine on aldehyd at 14° F. (−10° C.); the product separated by fractional distillation and changed to the hydrate by the addition of water.)

Comp.— $\text{C}_4\text{H}_5\text{Cl}_3\text{O} \cdot \text{H}_2\text{O}$.

Prop.—Pearly white crystalline scales; odour pungent, taste nauseous, acid. Fuses at 172° F. (77.8 C.) Soluble in water, glycerine, and rectified spirit; nearly insoluble in chloroform.

Oper.—Hypnotic and anodyne.

Use.—To procure sleep, especially when the heart is affected, and chloral hydrate should not be employed. To give relief in cases of trigeminal neuralgia.

Dose.—Gr.v. to gr.xv.

CAFFEINA. Caffeine. *Syn.* Caffèia, Theina, Guaranina. (An alkaloid

from the dried leaves of *Cumellia Thea*, or the dried seeds of *Coffea arabica*, by evaporating aqueous infusions from which astringent colouring matters have been removed.)

Comp.— $C_8H_{10}N_4O_{12}H_2O$.

Prop.—Colourless acicular crystals. Sparingly soluble in cold water and in ether, more freely in rectified spirit and in boiling water, very soluble in chloroform.

Oper.—Diuretic, cardiac tonic, antineuralgic.

Use.—In dropsical effusion due to heart disease; also in headache, migraine, and neuralgia.

Dose.—Gr. j. to gr. v.

Tests.—Treated with a crystal of chlorate of potassium and a few drops of hydrochloric acid, and evaporated to dryness, a reddish residue results, which becomes purple when moistened with ammonia.

Off. Prep.—*Caffeinæ Citras*.

CAFFEINÆ CĪTRAS. Citrate of Caffeine. (A weak compound obtained by mixing caffeine with a heated solution of citric acid.)

Comp.— $C_8H_{10}N_4O_{12}H_3C_6H_5O_7$.

Prop.—White, inodorous, faintly bitter taste, acid reaction. Soluble in a mixture of two parts of chloroform and one of rectified spirit.

Oper. & Use.—Similar to those of caffeine.

Dose.—Gr. ij. to gr. x.

CALAMĪNA PRÆPARĀTA. Prepared Calamine. (Native carbonate of zinc, calcined, powdered, and freed from gritty particles by elutriation.)

Comp.— $ZnCO_3$.

Prop.—Pale pinkish-brown powder, without grittiness, almost entirely soluble in acids.

Oper.—Astringent.

Use.—Externally as local sedative in eczema.

Off. Prep.—*Ung. Calaminæ*.

CALCĪI CARBŌNAS PRÆCIPITĀTA. Precipitated Carbonate of Calcium. (This is a very pure carbonate of calcium precipitated from solution of chloride of calcium by carbonate of sodium, and is more fit for internal use than the common prepared chalk.)

Dose.—Gr. x. to gr. lx.

Off. Prep.—*Trochisci Bismuthi*.

CALCĪI CHLORIDI LIQUOR. See *Liquor Calcii Chloridi*.

CALCĪI CHLORIDUM. Chloride of Calcium. (Formed by neutralising hydrochloric acid with carbonate of calcium.)

Comp.— $CaCl_2 \cdot 2H_2O$.

Prop.—In white agglutinated masses, dry, but very deliquescent; evolves no chlorine or hypochlorous acid on addition of hydrochloric acid; soluble in twice its weight of water, also in alcohol. No precipitate with solution of lime.

Oper.—Resolvent, alterative.

Use.—In fibrous tumours of uterus, glandular and scrofulous affections.

Dose.—Gr. iij. to gr. x.

Off. Prep.—*Liquor Calcii Chloridi*.

CALCĪI HYDRAS. Hydrate of Calcium. *Syn.* Slaked Lime. (Recently prepared lime slaked with water.)

Comp.— $Ca(OH)_2$, with some impurities.

Use.—To make Liq. Calcis and Liq. Calcis Saccharatæ, and in the preparation of the caustic alkalis.

CALCII HYPOPHOSPHIS. Hypophosphite of Calcium. (Obtained by heating phosphorus with hydrate of calcium and water, until phosphuretted hydrogen ceases to be evolved, then filtering the liquid, separating uncombined lime with carbonic acid gas, and evaporating the remaining solution until the salt separates in a crystalline condition.)

Comp.— $\text{Ca}(\text{PH}_2\text{O}_2)_2$.

Prop.—A white crystalline salt, with a pearly lustre and a bitter, nauseous taste. Insoluble in rectified spirit; soluble in six parts of cold water, and only slightly more soluble in hot. The crystals do not lose water when heated to 300°F . (148°C .); at a red heat they ignite and evolve spontaneously phosphuretted hydrogen, and leave a reddish-coloured residue, amounting to about 80 per cent. of the salt.

Oper.—Tonic, refrigerant, and alterative.

Use.—In phthisis, to supply the want of phosphorus in the system; but never to be used in the acute stage of any inflammatory disease of the lungs. Opposite opinions are held as to its value as a medicine in phthisis.

Dose.—Gr.v. to gr.x. to be given in half a tumbler of milk or water at breakfast time.

CALCII PHOSPHAS. Phosphate of Calcium. (*Ossis Usti* unc.iv.; *Acidi Hydrochlorici* fl.unc.vj.; *Aquæ Destillatæ* Oij.; *Liq. Ammoniacæ* fl.unc.xij. vel q. s.)

Comp.— $\text{Ca}_3(\text{PO}_4)_2$.

Prop.—Light white amorphous powder, insoluble in water, soluble in dilute nitric acid; this solution gives a white precipitate with excess of dilute solution of acetate of sodium, and a little perchloride of iron or oxalate of ammonium.

Oper.—Antacid.

Use.—Rickets.

Dose.—Gr.x. to gr.xx.

Off. Prep.—*Pulv. Antimonialis*.

CALCII SULPHAS. Sulphate of Calcium. (Native sulphate of calcium rendered nearly anhydrous by heat.)

Comp.— CaSO_4 .

Use.—In preparation of Calx Sulphurata.

CALOMĒLAS. See *Hydrargyri Subchloridum*.

CALUMBÆ RADIX. Calumba Root. The root, cut transversely and dried. (*Jateorhiza Calumba* (*Cocculus palmatus*). N.O. *Menispermaceæ*. Eastern Africa, between Ibo and Zambesi. H)

Comp.—A non-nitrogenised crystallisable principle called *Calumbin* ($\text{C}_{21}\text{H}_{22}\text{O}_7$), slightly soluble in water or proof spirit, an acid *Calumbic* ($\text{C}_{21}\text{H}_{21}\text{O}_7$), and an alkaloid *Berberine* ($\text{C}_{20}\text{H}_{17}\text{NO}_4$), the salts of which are soluble, and colour the root.

Prop.—Odour slightly aromatic, taste an unpleasant bitter; in circular flat pieces, bark of the sections thick, dark, olive; central part yellowish. A decoction when cold is blackened by solution of iodine.

Oper.—Tonic, antiseptic.

Use.—In bilious vomitings, and those attendant on pregnancy, dyspepsia, and cholera; in the mesenteric fever of infants, we have found the following powder, aided by daily long-continued frictions of the abdomen with soap liniment, of great efficacy. $\mathcal{R}$ Potassii Sulphatis

gr.x.; pulv. calumbæ gr.vj.; pulv. rhei gr.iiij. Misce: bis terve quotidie sumend.

Dose.—Gr.v. to gr.xx. twice or thrice a day.

Incomp.—Salts of lead; infusion of galls; solution of lime and corrosive sublimate. Not affected by preparations of iron.

Off. Prep.—*Extract. Calumbæ. Infusum Calumbæ. Mist. Ferri Aromat. Tinct. Calumbæ.*

CALX. Lime, or Quick Lime. (From marble or native carbonate of calcium by calcining to expel carbonic acid gas.)

Comp.—CaO.

Prop.—Whitish compact masses, which readily absorb water; with rather less than their weight of water the masses swell and fall into powder with the development of much heat; taste burning, urinous; decomposes animal matter; difficult of fusion; dissolves in hydrochloric acid without effervescence: solution not precipitated by ammonia.

Oper.—Escharotic; but not now used.

Off. Prep.—*Calcii Hydras.*

CALX CHLORINATA. Chlorinated Lime. (By passing chlorine gas over slaked lime spread in a proper vessel until it is saturated.)

Comp.—Hypochlorite of calcium with chloride of calcium (CaCl_2O_2 , CaCl_2) and a variable amount of hydrate of calcium.

Prop.—White, with the odour of chlorine.

Use.—As a disinfecting agent.

Off. Prep.—*Liq. Calcis Chlorinatae. Vapor Chlori.*

CALX SULPHURATA. Sulphurated Lime. *Syn.* Sulphide of Calcium. (Formed by heating to redness a mixture of sulphate of calcium and wood charcoal.)

Comp.—A mixture containing not less than 50 per cent. of sulphide of calcium (CaS).

Prop.—Nearly white powder, with odour resembling that of sulphuretted hydrogen.

Oper.—Causes diminished formation of pus.

Use.—In inflammation to check formation of pus; in boils, carbuncles, &c., to hasten maturation.

Dose.—Gr. $\frac{1}{10}$ to gr.j.

CAMBOGIA. Gamboge. (A gum-resin, obtained from *Garcinia Hanburii* (*Garcinia Morella*, var. *pedicellata*) imported from Siam. N.O. *Guttiferae*.)

Comp.—Gum, resembling cherry-tree gum, and nearly insipid, and about 70 per cent. of resin, or gambogic acid ($\text{C}_{30}\text{H}_{35}\text{O}$?).

Prop.—In cylindrical pieces, breaking easily with a smooth conchoidal glistening fracture; colour tawny, changing to yellow when it is rubbed with water; inodorous, taste acrid. An emulsion made with boiling water does not become green with a solution of iodine.

Oper.—Cathartic (*drastic*), emetic, hydragogue, anthelmintic.

Use.—In visceral obstructions and dropsy in tapeworm, conjoined with carbonate of potassium.

Dose.—Gr.j. to gr.iv. in powder joined with calomel, squill, &c.

Off. Prep.—*Pilulae Cambogiae Comp.*

CAMPORA. Camphor. (Concrete volatile oil, obtained from wood by sublimation. *Cinnamomum Camphora* (*Camphora officinarum*). N.O. *Lauraceae*. $\text{C}_{10}\text{H}_{16}\text{O}$)

Comp.— $C_{10}H_{16}O$.

Prop.—Odour powerful, penetrating; taste bitterish, aromatic, accompanied with the sensation of cold; volatile, white, semi-pellucid, brittle, yet not easily pulverised, except by the addition of a few drops of spirit; texture crystalline; soluble in alcohol, ether, oils, vinegar, and, in a very small degree, in water; lighter than water.

Oper.—Diffusible stimulant. Narcotic, diaphoretic, sedative; externally anodyne.

Use.—In typhus, cynanche maligna, confluent small-pox, and other exanthemata of the typhoid type; in atonic gout, and as an adjunct to bark and opium in checking gangrene. Combined with hyoscyamus it gives great relief in dysmenorrhœa and affections of the urinary organs. It produces its narcotic and sedative effects with very little increase of pulse, and therefore may be used in mania, pneumonia, and other inflammatory complaints, united with nitre and antimonials. Externally, when dissolved in oil, it allays the pain of rheumatism and of deep-seated inflammations.

Dose.—Gr. j. to gr. x. in powder, with sugar, &c.; in pills; or in mixture with mucilage or almond confection. The effects of an overdose are counteracted by opium. For external application it is dissolved in oil or alcohol.

Off. Prep.—*Aqua Camphoræ. Lin. Aconiti. Lin. Belladonnæ. Lin. Camphoræ. Lin. Camphoræ Comp. Lin. Chloroformi. Lin. Hydrargyri. Lin. Opii. Lin. Saponis. Lin. Sinapis Comp. Lin. Terebinthine. Lin. Terebinthine Aceticum. Spir. Camphoræ. Tinct. Camphoræ Comp. Ung. Hydrargyri Comp.*

CANELLÆ CORTEX. Canella Bark. (*Canella alba. N.O. Canellaceæ. West Indies. 12*)

Prop.—In quills or broken pieces, hard, of a yellowish-white or pale orange colour, somewhat lighter on the internal surface. It has an aromatic clove-like odour, and pungent, bitter, acrid taste. Virtues partially extracted by water, entirely by alcohol.

Oper.—Aromatic, tonic, stomachic.

Use.—In atonic dyspepsia, and generally as an aromatic addition to bitter tonics and cathartics.

Dose.—Gr. xv. to gr. xxx. in powder; in infusion fl.unc. jss.

Off. Prep.—*Vinum Rhei.*

CANNĀBIS INDĪCA. Indian Hemp. Known in India as Gunjah or Ganga. The dried tops of the female plant. (*Cannabis sativa. N.O. Cannabinaceæ. India.*)

Prop.—Gunjah is sold in bundles about 2 ft. long and 3 in. in diameter; it consists of the stems with the leaves of the plant, the remains of the flowers, and a few ripe fruits, accreted together by the resinous exudation.

Comp.—Cannabin, volatile oil, resin.

Oper.—Narcotic, antispasmodic, anodyne. Resembling the solanaceous plants, it in small doses excites the mental powers, and in larger causes delirium. It does not dilate the pupil.

Use.—Neuralgia, spasmodic coughs, as pertussis, and asthma, dysmenorrhœa, tetanus, hydrophobia, chorea, chronic rheumatism. Administered in the form of tincture or extract, it should be suspended in mucilage; alkaline fluids were formerly employed to hold it in solution, but they destroy its activity.

Off. Prep.—*Tinct. Cannabis Indicæ. Extractum Cannabis Indicæ.*

CANTHARIS. Cantharides. The Blistering Fly. (*Cantharis vesicatoria*. Class *Insecta*, Order *Coleoptera*. Russia, Sicily, and Hungary.)

Comp.—Cantharidin about 0.4 per cent., green oil, black insoluble matter, yellow viscid matter, fat, phosphates of calcium and magnesium.

Prop.—Odour fœtid; taste burning; body oblong, green-gold, and shining, from 8 to 10 lines long; the elytra or wing-sheaths encase two thin brownish membranous wings. They retain their active properties for many years, if kept dry.

Oper.—Stimulant, diuretic, rubefacient, vesicant; both their internal use and their external application are apt to produce strangury; active properties depend on the cantharidin.

Use.—Internally in dropsy, obstinate gleet, and leucorrhœa; retention of urine, owing to want of action in the bladder, and in incontinence of urine from debility of the bladder; lepra; but their internal use requires caution. For their external use see official preparations.

Off. Prep.—*Acetum Cantharidis*. *Charta Epispastica*. *Emplastrum Calefaciens*. *Emplast. Cantharidis*. *Liquor Epispasticus*. *Tinct. Cantharidis*. *Ung. Cantharidis*

CAPSICI FRUCTUS. Capsicum Fruit, dried and ripe. (*Capsicum fastigiatum*. N.O. *Solanaceæ*. Imported from Zanzibar, and distinguished in commerce as Guinea or pod pepper. ☉)

Comp.—A concrete volatile oil *capsicin*, and an acrid soft resin.

Prop.—Pod membranous, from 5 to 8 lines long, 2 lines broad, straight, conical, pointed, smooth shining, but somewhat corrugated, orange-red; odour aromatic, pungent; taste very biting, hot, aromatic; its active matter is yielded to ether, alcohol, and water.

Oper.—Stimulant, rubefacient.

Use.—In atonic gout, the flatulence of dyspepsia, lethargy. Its solution (*Capsici pulv.* gr. lx.; *Sodii Chlor.* gr. xx.; *Aceti fl. dr.* iv.; *Aquæ ferventis fl. unc.* vj. *Cola*) forms the best gargle in cynanche maligna and scarlatina. Cataplasms of it are used in coma and the delirium of typhus.

Dose.—Gr. ss. to gr. j. in pills. Usually administered in form of tincture.

Incomp.—Nitrate of silver, perchloride of mercury, acetates of lead, sulphates of iron, zinc, and copper, and the carbonates of alkalis.

Off. Prep.—*Tinctura Capsici*.

CARBO ANIMĀLIS. Animal Charcoal. Bone-black. (The residue of bones which have been exposed to a red heat without the access of air. Consists principally of carbon and phosphate and carbonate of calcium.)

Use.—In the preparation of *Carbo Animalis Purificatus*.

CARBO ANIMĀLIS PURIFICĀTUS. Purified Animal Charcoal. (Bone-black deprived of its earthy salts by hydrochloric acid.)

Prop.—Inodorous and tasteless, absorbs gases and odours.

Oper.—Antiseptic, antacid, antidotal.

Use.—In flatulent eructations; to correct fœtid breath, also as an antidote in poisoning by opium, nux vomica, aconite. Externally, mixed with bread in a poultice in fœtid ulcers, &c.

Dose.—A teaspoonful to a tablespoonful suspended in water.

CARBO LIGNI. Wood Charcoal. (Prepared by exposure to red heat without access of air.)

Comp.—Carbon, and about 2 per cent. of salts, earths, &c.

Prop.—Inodorous, tasteless, black, brittle.

Oper.—Antiseptic.

Use.—In the putrid eructations of dyspepsia : as a cataplasm with linseed meal in foetid ulcers ; the best tooth powder.

Dose.—Gr.xx. to gr.lx. ; often united with rhubarb.

Off. Prep.—*Cataplasma Carbonis*.

CARDAMŌMI SEMINA. Cardamoms. (Seeds of the *Elettaria Cardamomum*. N.O. *Zingiberaceæ*. East Indies. Malabar.)

Prop.—Odour agreeably aromatic ; taste pungent, grateful.

Oper.—Carminative, stomachic.

Use.—In the flatulent colic of children, united with rhubarb and magnesia ; but principally to give warmth to other remedies.

Dose.—Gr.v. to gr.lx. in powder.

Off. Prep.—*Ext. Coloc. Comp. Pulv. Cinnamomi Comp. Pulvis Cretæ Aromaticus. Pulv. Cretæ Aromat. c. Opio. Tinct. Cardam. Comp. Tinct. Gentiane Comp. Tinct. Rhei. Vinum Aloes.*

CARŪI FRUCTUS. Caraway Fruit. (*Carum Carui*. N.O. *Umbelliferae*. England and Germany. ♂)

Prop.—Fruit usually separates into two parts, each about 2 lines long, curved, tapering at the ends, brown, with 5 paler longitudinal ridges. Odour aromatic ; taste warm, grateful. Contains 4·7 to 5·4 per cent. of a volatile oil.

Oper.—Stimulant, carminative.

Use.—In flatulent colic, and to give warmth to purgatives.

Dose.—Gr.x. to gr.lx. swallowed whole or in powder.

Off. Prep.—*Aq. Carui. Confectio Opii. Confectio Piperis. Ol. Carui. Pulv. Opii Comp. Tinct. Cardam. Comp. Tinct. Sennæ.*

CARŪI OLĒUM. See *Oleum Carui*.

CARYŌPHYLLUM. Clove. The dried unexpanded flower-bud. (*Eugenia caryophyllata* (*Caryophyllus aromaticus*). N.O. *Myrtaceæ*. Penang, Bencoolen, and Amboyna. ♀)

Prop.—About 6 lines long, dark reddish-brown, plump and heavy, consisting of a nearly cylindrical body, surmounted by four teeth and a globular head ; odour strong, aromatic, and peculiar ; taste acrid, pungent ; figure like a small nail with a toothed head.

Comp.—Volatile oil, resin, tannin, and woody fibre. The volatile oil consists of a hydrocarbon ($C_{10}H_{16}$) with eugenic acid, caryophyllin, and eugenin.

Oper.—Stimulant, carminative.

Use.—In atonic dyspepsia, in the vomiting of pregnancy, flatulence, and as a corrective to other remedies. Also to arrest pain of toothache.

Dose.—Gr.v. to gr.xxx. in powder.

Off. Prep.—*Inf. Aurantii Comp. Inf. Caryophylli. Mist. Ferri Aromatica. Oleum Caryophylli. Vinum Opii.*

CARYŌPHYLLI OLĒUM. Oil of Cloves. See *Oleum Caryophylli*.

CASCARILLÆ CORTEX. Cascarilla Bark. (*Croton Eluteria*. N.O. *Euphorbiaceæ*. Bahamas. ♀)

Prop.—In quills 1 or 3 inches or more in length, and from 2 to 5 lines in diameter ; dull brown, with a coating of crustaceous lichens ; breaks with a resinous fracture ; odour slightly aromatic ; taste bitterish, aromatic ; when burning, and the flame extinguished, the smoke has

the odour of musk; active parts an essential oil, and bitter extractive, completely extracted by proof spirit. According to Duval, a bitter crystalline neutral principle (*Cascarillin*). And also tannic acid, colouring matter, and a volatile oil.

Oper.—Tonic, stomachic.

Use.—As an adjunct to cinchona in ague; in obstinate diarrhœa, and after dysentery; in dyspepsia and flatulent colic.

Dose.—Gr.x. to gr.xxx. in powder.

Off. Prep.—*Infusum Cascarillæ. Tinct. Cascarillæ.*

CASSIÆ PULPA. Cassia Pulp. (*Cassia Fistula*, N.O. *Leguminosæ*. Sub-order *Cæsalpinieæ*. East and West Indies. 12)

Prop.—Pulp blackish-brown, viscid, surrounding flattish oval, reddish-brown seeds; sweet, slightly acid; odour somewhat sickly.

Oper.—Laxative.

Use.—Where a gentle medicine is required in costive habits, combined with aromatics.

Dose.—Gr.cxx. and upwards.

Off. Prep.—*Confectio Sennæ.*

CATAPLASMA CARBŌNIS. Charcoal Poultice. (*Carbonis Ligni contriti* unc.ss.; *Micæ Panis* unc.ij.; *Lini Farinæ* unc.jss.; *Aquæ ferventis* fl.unc.x. Macerate the bread in the water for 10 minutes near the fire, then mix, and add the meal gradually, stirring the ingredients to make a soft poultice; mix this with half the charcoal, and sprinkle the remainder on the surface of the poultice.)

Use.—In gangrene and fœtid ulcers.

CATĀPLASMA CONĪI. Hemlock Poultice. (*Succi Conii* unc.j.; *Lini Farinæ* unc.iv.; *Aquæ ferventis* fl.unc.x. Evaporate the hemlock juice to half its volume, add this to the linseed meal and water previously mixed, and stir them together.)

Use.—In cancer, painful sores, and glandular swellings.

CATAPLASMA FERMENTI. Yeast Poultice. (*Cererisæ Fermenti* fl.unc.vj.; *Farinæ Tritici* unc.xiv.; *Aquæ* ad 100° F. (37°·8 C.) *calcfactæ* fl.unc.vj. Mix the yeast with the water, and stir in the flour. Then place it near the fire till it rises.)

Oper.—Antiseptic.

Use.—Applied to gangrenous and sloughing sores.

CATĀPLASMA LĪNI. Linseed Poultice. (*Aquæ ferventis* fl.unc.x.; *Lini Farinæ* unc.iv. Mix the linseed meal with the water gradually, constantly stirring.)

Use.—A suppurative poultice.

CATAPLASMA SĪNĀPIS. Mustard Poultice. (*Aquæ ferventis* fl.unc.x.; *Lini Farinæ*, *Sinapis contritæ*, āā unc.ijss.)

Oper.—Rubefacient, stimulant.

Use.—Applied to the soles of the feet, in delirium, coma, and sinking of typhus, &c.; in affection of the heart and lungs; to the painful part in rheumatism, and in neuralgic and hysterical pains.

CATĀPLASMA SŌDÆ CHLORĪNĀTÆ. Chlorine Poultice. (*Aquæ ferventis* fl.unc.vij.; *Lini Farinæ* unc.iv.; *Liquoris Sodæ Chlorinatæ* fl.unc.ij. Mix the meal with the water, and then add the chlorinated soda.)

Oper.—Antiseptic, stimulant.

Use.—In gangrenous sloughing fœtid ulcers.

CATĚCHU. *Catechu.* *Syn.* *Catechu pallidum.* (An extract of the leaves and young shoots of *Uncaria Gambier.* N.O. *Cinchonaceæ.* Singapore, and other places in the Indian Archipelago. $\frac{1}{2}$)

Comp.—Catechu-tannic acid, catechuic acid or catechin, colouring matter, mucilage, and insoluble substances.

Percentage comp.: Tannin (?) 48.5, extractive 36.5, mucilage 8.0, insoluble matters 7.0.

Prop.—In cubes, or masses formed of coherent cubes, the former about an inch in diameter, externally brown, internally ochrey-yellow or pale brick-red, breaking easily with a dull earthy fracture. Inodorous; taste bitter, astringent, mucilaginous, sweetish; soluble in alcohol and in boiling water.

Oper.—Astringent.

Use.—In diarrhoea from a relaxed state of the bowels, and in intestinal hæmorrhages; locally in aphthæ, ulceration of the gums, and in coughs and hoarseness from the relaxation of the uvula.

Dose.—Gr.x. to gr.xxx. in powder; in the latter case a piece is allowed to dissolve slowly in the mouth.

Off. Prep.—*Infusum Catechu.* *Pulv. Catechu Comp.* *Tinct. Catechu.* *Trochisci Catechu.*

CĚRA ALBA, CĚRA FLAVA. White and Yellow Wax. (A secretion of the *Apis mellifica*, or honey bee. Class *Insecta*, Order *Hymenoptera*. Yellow wax is the prepared honeycomb of the honey bee; and the white wax is obtained by bleaching the yellow variety by exposure to moisture, air, and light.)

Comp.—Myricin, cerotic acid, and cerolein.

Prop.—White wax is hard, nearly white, translucent, not unctuous to the touch. The yellow wax is firm, breaking with a granular fracture; odour aromatic, resembling that of honey; tasteless; dry; colour yellow, when recent; melts at 146° F. ($63^{\circ}3$ C.)

Oper.—Demulcent, emollient.

Use.—Principally used in the formation of ointments.

Off. Prep.—*Ung. et Empl. varia.* *Charta Epispastica.* *Pilula Phosphori.*

CĚŘĚVĚSĚ FERMENTUM. Yeast. (The ferment obtained in brewing beer, and produced by *Saccharomyces (Torula) cerevisiæ.*)

Prop.—Viscid, semifluid, frothy, exhibiting under the microscope numerous round or oval confervoid cells.

Oper.—Stimulant, tonic, alterative, antiseptic.

Use.—In poultices acts as a stimulating deodoriser. It has also been given internally, with advantage, in combination with sugar and wine in typhus fever, and also to prevent boils and carbuncles, and in diabetes. Also may be used in the preparation of citric acid.

Dose.—Fl.unc.ss. to fl.unc.j.

Off. Prep.—*Cataplasma Fermenti.*

CĚŘĚ OXĚLAS. Oxalate of Cerium. (Obtained as a precipitate by adding a solution of oxalate of ammonium to a soluble salt of cerium.)

Comp.— $\text{Ce}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$. Usually contains also some oxalate of lanthanum and oxalate of didymium.

Prop.—A white granular powder, insoluble in water, decomposed at a dull red heat into a reddish-brown powder, which dissolves completely without effervescence in boiling hydrochloric acid, and the resulting solution gives with a solution of sulphate of potassium a white crystalline precipitate. If the salt be boiled with solution of

potash, and filtered, the filtrate is not affected by chloride of ammonium, but when supersaturated with acetic acid, it gives with chloride of calcium a white precipitate, which is soluble in hydrochloric acid. 10 gr. when incinerated lose 5.2 gr. in weight.

Oper.—Sedative, especially to the mucous membrane of the stomach, much resembling bismuth.

Use.—To relieve sympathetic vomiting—especially the vomiting of pregnancy.

Dose.—Gr.j. to gr.ij. in pill.

CETĀCĒUM. Spermaceti. (A concrete fatty substance prepared from the oily matter of the head of the Sperm Whale. *Physeter macrocephalus*. Class *Mammalia*, Order *Cetacea*.)

Comp.—Palmitate of cetyl, which is broken up by alkalis into palmitic acid and cetylic alcohol or hydrate of cetyl.

Prop.—Inodorous, insipid, white, crystallised, friable, semitransparent, scarcely unctuous. Melts at 111° to 122° F. (43°·9 to 50° C.); partially soluble in alcohol; reducible to powder by the addition of a little rectified spirit.

Oper.—Demulcent, emollient.

Use.—In coughs and dysentery; and in the composition of ointments.

Dose.—Gr.xxx. to gr.xc. rubbed up with sugar, or with an egg, in emulsion.

Off. Prep.—*Charta Epispastica*. *Ung. Cetacei*.

CETRĀRĪA. Iceland Moss. *Syn.* Iceland Lichen. (*Cetraria islandica*. Class *Cryptogamia*. N.O. *Lichenes*. North of Europe. $\mathcal{L}$)

Comp.—A gelatinous matter, *lichenin*; and a crystallisable bitter principle, *Cetraric acid*, or *Cetrarin*.

Prop.—Foliaceous, lobed, crisp, cartilaginous, brownish-white, paler beneath; inodorous when dry, feeble seaweed-like odour when moistened; taste bitter, mucilaginous.

Oper.—Tonic, demulcent, nutritive.

Use.—See *Decoct. Cetrariæ*.

CHARTA EPISPASTĪCA. Blistering Paper. (*Ceræ Albæ* unc.iv.; *Cetacei* unc.jss.; *Olei Olivæ* fl.unc.ij.; *Resinæ* unc. $\frac{3}{4}$; *Balsami Canadensis* unc. $\frac{1}{4}$; *Cantharidis contritæ* unc.j.; *Aquæ Destillatæ* fl.unc.vj. Digest all the ingredients, except the Canada balsam, in a water-bath for 2 hours, constantly stirring, then strain and separate the plaster from the watery liquid. Mix the balsam with the plaster melted in a shallow vessel, and pass strips of paper over the surface of the hot liquid, so that one surface of the paper shall receive a thin coating of plaster.)

Oper.—Vesicant.

Use.—Milder than the *Emplastrum Cantharidis*, but used in similar cases.

CHARTA SĪNĀPIS. Mustard Paper. (*Sinapis Semin. contrit.* unc.j.; *Liquoris Gutta Percha* unc.ij. vel q.s. It is recommended that strips of cartridge paper should be passed over the surface of the solution, so as to receive a thin coating.)

Oper.—Rubefacient, stimulant.

Use.—Applied to the soles of the feet or calves of the legs in states of prostration; to the back of the neck in headache; to the chest in pulmonary and cardiac affections not requiring more active treatment, and generally in neuralgic and hysterical pains. The mustard

paper ought to be immersed for a few seconds in tepid water before being applied.

CHIRATA. Chiretta. (*Ophelia Chirata* vel *Gentiana Chirata*. N.O. *Gentianaceæ*. India. ☉)

Prop.—Stem about 3 feet long, as thick as a goosequill, round, smooth, pale-brown, branches opposite, flowers small, numerous, panicked. Bitter without astringency.

Oper.—Pure bitter, tonic.

Use.—In atonic dyspepsia and general debility.

Off. Prep.—*Infusum Chiratæ*. *Tinct. Chiratæ*.

CHLORAL HYDRAS. Hydrate of Chloral. (Produced by the action of dry chlorine gas on anhydrous alcohol, with subsequent purification and addition of water.)

Comp.— C_2HCl_3O, H_2O .

Prop.—Crystals colourless, do not deliquesce on exposure to the air. They have a pungent but not an acrid odour, a pungent and rather bitter taste. They are soluble in less than their own weight of distilled water, rectified spirit, or ether, and in four times their weight of chloroform. 100 grains of hydrate of chloral, dissolved in an ounce of distilled water and mixed with 30 grains of slaked lime, carefully distilled, should yield not less than 70 grains of chloroform.

Oper.—Hypnotic; a sedative of the motor and sensory nervous system.

Use.—To procure sleep, which it does without the bad effects of morphine; to allay pain in gout, in nephritic calculus, or dental caries; to subdue choreic movements and maniacal excitement.

Dose.—Gr.v. to gr.xxx.

Off. Prep.—*Syrupus Chloral*.

CHLORI LIQUOR. See *Liquor Chlori*.

CHLOROFORMUM. Chloroform. (*Calcis Chlorinatæ* lb.x.; *Spiritus Rectificati* fl.unc.xxx.; *Aquæ* q.s.; *Calci Chloridi in frustula contusi* unc.ij.; *Calcis Ustæ* q.s.; *Acidi Sulphurici* q.s.; *Aquæ Destillatæ* fl.unc.ix. Raise the water and spirit mixed to 100° F. (37°·8 C.), add the chlorinated lime and 5lb. of the slaked lime, then distil, and having agitated the distillate with water, the crude chloroform remains at the bottom; it is washed with water, shaken with sulphuric acid, and redistilled with chloride of calcium and slaked lime.)

Comp.— $CHCl_3$.

Prop.—Colourless, pleasant odour, taste sweetish; sp. gr. 1·497, soluble in alcohol and ether, scarcely soluble in water (1 in 200). Does not redden litmus paper; when rubbed on the skin soon evaporates, almost without leaving any odour. Burns, but not readily, with a green smoky flame; not coloured by agitation with sulphuric acid.

Oper.—Stimulant, antispasmodic, sedative, narcotic, anæsthetic.

Use.—Internally, in asthma, spasmodic cough, cancer, chorea, tetanus, obstinate vomiting, hysteria. Externally, to allay pain and local irritation. But it is principally ordered to be inhaled for the prevention of pain during surgical operations, and in childbirth. It should always be administered most cautiously, and never without proper assistance. When it proves fatal, it does so suddenly.

Dose.—Internally, min.ij. to min.x.; being volatile it should be administered in draught, suspended in water by mucilage with a little spirit. Externally fl.dr.j. to fl.dr.iv. to fl.unc. of any liniment, or fl.unc.ss. to unc.j. of an ointment. Anæsthesia is usually produced

from the inhalation of the vapour from fl.dr.j. to fl.dr.ij. If faintness or sinking occur, atmospheric air, with ammonia to the nostrils, quickly restores the patient.

Off. Prep.—*Aqua Chloroformi. Linimentum Chloroformi. Spiritus Chloroformi. Tinctura Chloroformi Comp. Tinctura Chloroformi et Morphinae.*

CHRÿSĀRŌBĪNUM. Chrysarobin. *Syn.* Araroba or Goa Powder. (Medullary matter from stem and branches of *Andira Araroba*. N.O. *Leguminosae*.)

Comp.—Varies with age and degree of oxidation. Yields much chrysophanic acid ($C_{41}H_{10}O_4$) by oxidation. Before purification contains traces of woody tissue.

Prop.—When purified, light brownish-yellow crystalline powder. Tasteless, inodorous. Soluble in rectified spirit, almost insoluble in water. With sulphuric acid it gives a yellow or orange solution. With caustic potash it forms a yellow or reddish solution, changing to carmine by absorption of oxygen.

Oper.—Alterative in skin diseases.

Use.—In various skin affections, as psoriasis, eczema, acne, &c.; sometimes employed internally, to avoid the local discoloration caused by its external application. When thus employed it is apt to cause griping and purging.

Dose.—Gr. $\frac{1}{3}$ to gr. $\frac{1}{2}$.

Off. Prep.—*Unguentum Chrysarobini.*

CĪMĪCĪFŪGÆ RHĪZŌMA. Cimicifuga. *Syn.* Actææ Radix. Dried rhizome and rootlets. (*Cimicifuga racemosa* (*Actæa racemosa*). N.O. *Ranunculaceae*.)

Comp.—Volatile oil, resin, and a bitter neutral substance.

Prop.—Odourless, bitter, slightly acrid taste. Rhizome 2 to 6 inches long, flattened cylindrical, with remnants of aerial stems and small wiry rootlets. Fracture short, bark thick, woody tissue arranged in triangular or stellate form.

Oper.—Cardiac tonic, expectorant, antirheumatic.

Use.—In rheumatic fever, chorea, lumbago; also in bronchitis, acute catarrh, and phthisis. Employed only in form of official preparations.

Off. Prep.—*Extractum Cimicifugæ Liquidum. Tinctura Cimicifugæ.*

CINCHONÆ CORTEX. Cinchona Bark. (*Cinchona Calisaya, Cinchona officinalis, Cinchona succirubra, Cinchona lancifolia*, and other species. N.O. *Cinchonaceae*. Bolivia and Southern Peru. 24)

Comp.—Owing to their very variable composition, these barks are introduced into the B. P. for the preparation of alkaloids only.

Off. Prep.—*Cinchonidinæ Sulphas. Cinchoninæ Sulphas. Quininæ Hydrochloras. Quininæ Sulphas.*

CINCHŌNÆ RŪBRÆ CORTEX. Red Cinchona Bark. (The dried bark of stem and branches of cultivated plants of *Cinchona succirubra*. N.O. *Cinchonaceae*.)

Prop.—In quills and flat pieces, solid, heavy, dry; fracture short and smooth; internally woody, fibrous, of a deep brownish-red colour; no marked odour, taste bitter, somewhat astringent. Its active principles are *Quinine, Cinchonine, and Cinchonidine*.

Oper.—These barks are strongly and permanently tonic and antiperiodic, slightly astringent, stomachic, and febrifuge.

Use.—In intermittents after evacuating the stomach and bowels; in continued fevers, keeping the bowels clear; confluent small-pox; erysipelas; acute rheumatism; cynanche maligna; scarlatina; passive hæmorrhages; and in every disease attended with deficient action. Also in enemata, gargles, and externally as a lotion, in gangrenous ulcerations, &c. To check the nausea excited by it, wines, aromatics, nitrohydrochloric and sulphuric acids are added; to prevent purging, opium; costiveness, rhubarb.

Dose.—Gr.x. to gr.lx.

Off. Prep.—*Decoct. Cinchonæ. Ext. Cinchonæ Liq. Inf. Cinchonæ Acid. Mist. Ferri Aromatica. Tinct. Cinchonæ. Tinct. Cinchonæ Comp.*

CINCHONIDINÆ SULPHAS. Sulphate of Cinchonidine. (Obtained by further concentration of the mother-liquors of the crystallisation of sulphate of quinine, purified by recrystallisation from alcohol, and finally from hot water.)

Comp.— $(C_{20}H_{24}N_2O)_2, H_2SO_4, 3H_2O$.

Prop.—White silky crystals, mostly acicular. Soluble in water, alcohol, ether, or in dilute acids; nearly insoluble in chloroform or ammonia. An aqueous solution turns a ray of polarised light to the left, and is not fluorescent when acidified. Burns without residue.

Oper.—Tonic and antipyretic.

Use.—As quinine.

Dose.—Gr.j. to gr.x.

CINCHONINÆ SULPHAS. Sulphate of Cinchonine. (Obtained from the bark of various species of *Cinchona* and *Remijia*. Obtained from the mother-liquors of quinine by precipitation with caustic soda, washing with spirit, dissolving in sulphuric acid, purifying with animal charcoal, and then allowing to crystallise.)

Comp.— $(C_{20}H_{24}N_2O)_2, H_2SO_4, 2H_2O$.

Prop.—Hard, short prismatic crystals, with vitreous lustre. Soluble in water and in chloroform, also in rectified spirit and dilute acids; almost insoluble in ether and ammonia. Aqueous solution turns a ray of polarised light to the right, and is not fluorescent when acidified. Burns without residue.

Oper. & Use.—As sulphate of cinchonidine.

Dose.—Gr.j. to gr.x.

CINNAMOMI CORTEX. Cinnamon Bark. (*Cinnamomum zeylanicum* N.O. *Lauraceæ*. Ceylon. ۷)

Prop.—Odour aromatic; taste pleasantly pungent, sweetish, depending on essential oil; a hydride of cinnamyl (C_9H_8O); colour light yellow, brown; pieces quilled within each other, not thicker than paper pliable; fracture fibrous and woody.

Oper.—Stimulant, astringent, carminative, tonic.

Use.—As a grateful aromatic in dyspepsia and diarrhœa; to cover the taste of nauseous remedies. The infusion checks vomiting. Chewed in paralysis of the tongue.

Dose.—Gr.v. to gr.xx. in powder.

Off. Prep.—*Aq. Cinnamomi. Dec. Hæmatoxyli. Infusum Catechu. Oleum Cinnamomi. Pulv. Catechu Comp. Pulv. Cinnamomi Comp. Pulv. Cretæ Aromaticus. Pulv. Kino Comp. Tinct. Cardamomi Comp. Tinct. Catechu. Tinct. Cinnamomi. Tinct. Lavandulæ Comp. Vinum Opii.*

CINNAMOMI OLĒUM. See *Oleum Cinnamomi*.

COCĀ. Coca. *Syn.* Cuca. Dried leaves. (*Erythroxylon Coca*. N.O. *Erythroxylaceæ*.)

Comp.—Cocaine ($C_{17}H_{21}NO_4$) with a variety of tannic acid.

Prop.—Odour faintly tea-like, especially when bruised. Taste bitter, aromatic. Shortly stalked, oval or lanceolate, 1-2 in. long; midrib prominent, with a curved line on each side of it, extending from base to apex.

Oper.—Tonic, stimulant.

Use.—In conditions of exhaustion, especially in old people. The alkalioid is employed for its powerful local anæsthetic action.

Dose.—Dr.ss. to dr.ij.

Off. Prep.—*Extractum Cocæ Liquidum*. *Cocainæ Hydrochloras*.

COCAINÆ HYDRŌCHLORAS. Hydrochlorate of Cocaine. (By agitating with ether an aqueous solution of an acidulated alcoholic extract of coca leaves, made alkaline with carbonate of sodium; the product is purified, decolorised, neutralised with hydrochloric acid, and crystallised.)

Comp.— $C_{17}H_{21}NO_4 \cdot HCl$.

Prop.—Colourless acicular crystals or crystalline powder. Soluble in water, alcohol, and ether. The aqueous solution gives a yellow precipitate with chloride of gold, and on the tongue causes tingling followed by numbness.

Oper.—Local anæsthetic.

Use.—In operations on the eye; it causes anæsthesia with dilatation of the pupil and loss of accommodation. It is also used as a local anæsthetic for minor operations, a 4 per cent. solution being injected subcutaneously, or stronger solutions applied to mucous surfaces.

Dose.—Gr. $\frac{1}{2}$ to gr.j.

Off. Prep.—*Lamellæ Cocainæ*.

COCCUS. Cochineal. The dried female. (*Coccus Cacti*. Class *Insecta*, Order *Hemiptera*. Mexico and Teneriffe.)

Prop.—Faint, heavy odour; taste acid, bitterish, astringent; colour purplish-black or purplish-grey externally, easily reduced to dark red or puce-coloured powder; small, irregular, ovate, plano-convex.

Use.—Chiefly for giving a red colour to tinctures, &c.; in pertussis on the Continent.

Off. Prep.—*Tinct. Cardamomi Comp.* *Tinct. Cinchonæ Comp.* *Tinct. Cocci*.

CŌDEINA. Codeine. *Syn.* Codeia. (From the ammoniacal liquors from which morphine has been obtained, by precipitating with caustic potash, and purifying by recrystallisation from ether.)

Comp.— $C_{18}H_{21}NO_3 \cdot H_2O$.

Prop.—Colourless octahedral crystals, soluble in water, ammonia, spirit, and dilute acids. When dissolved in sulphuric acid it forms a colourless solution which, when gently warmed with molybdate of ammonium or a trace of perchloride of iron, assumes a deep blue colour.

Oper.—Feebly narcotic.

Use.—In diabetes, to diminish the amount of secretion without producing narcotic effects.

Dose.—Gr. $\frac{1}{4}$ to gr.ij.

COLCHICI CORMUS ET SEMĪNA. Colchicum Corm and Seeds. The corm, recent and dried, and fully ripe seeds of the Meadow

Saffron. (*Colchicum autumnale*. N.O. *Melanthaceæ*. Europe. 24)
Collected at the end of June. The corm must be stripped of its coats,
sliced transversely, and dried at a temperature not exceeding 150° F.
(65°-5 C.)

Comp.—*Colchicine*, a peculiar alkaloid resembling veratrine, fatty
matters, gum, starch, lignin.

Prop.—Fresh corm about the size of chestnut, flattened when it has a
new corm in process of development, furnished with outer brown
and inner yellow coat, internally white, solid, and fleshy. The seeds
are about the size of white mustard seeds, very hard, and of a reddish-
brown colour. Taste bitter and acrid, excoriating the mouth.

Oper.—Sedative, narcotic, diuretic, favouring the excretion of urine
and uric acid, also of bile by the bowels; cathartic.

Use.—In dropsies, gout, and rheumatism.

Dose.—Gr.ij. to gr. viij. of the recent corm in pills.

Off. Prep.—Corm:—*Extractum Colchici*. *Extract. Colchici Aceticum*.
Vinum Colchici. Seeds:—*Tinctura Colchici Seminum*.

COLLÖDĪUM. Collodion. (*Pyroxylin* unc.j.; *Aetheris* fl.unc.xxxvj.;
Spiritus Rectificati fl.unc.xij. Mix the ether and rectified spirit, and
dissolve the pyroxlin (gun cotton) in it.)

Comp.—Pyroxlin (gun cotton) dissolved in ether.

Prop.—A colourless, inflammable liquid, which leaves on evaporation a
thin transparent film insoluble in water or rectified spirit.

Oper.—Protective as a plaster.

Use.—In wounds, to arrest hæmorrhage from leech-bites, in chapped
nipples, and in some skin diseases. It must be applied by means of a
camel's-hair brush. Best applied in the form of the succeeding pre-
paration, Collodium Flexile.

COLLÖDĪUM FLEXĪLE. Flexible Collodion. (*Collodii* unc.vj.; *Bal-
sami Canadensis* gr.cxx.; *Olei Ricini* fl.dr.j. Mix and keep in a well-
corked bottle.)

Use.—A manageable form for the application of collodion.

COLLÖDĪUM VESĪCANS. Blistering Collodion. (*Liq. Epispastici*
fl.unc.xx.; *Pyroxylin* fl.unc.j.) Dissolve.

Use.—A blistering agent.

COLÖCYNTHĪDIS PULPA. Colocynth Pulp. (The dried decorti-
cated fruit of *Citrullus Colocynthis*. N.O. *Cucurbitaceæ*. Smyrna,
Trieste, France, and Spain. ☉)

Comp.—*Colocynthin*, a peculiar bitter principle; soluble in water,
alcohol, and ether.

Prop.—Dry pulp; taste bitter, nauseous, acrimonious; light, white or
pale yellow; spongy; seeds should be removed.

Oper.—Drastic, cathartic.

Use.—Too violent to be used alone.

Dose.—Gr.ij. to gr.viij.

Off. Prep.—*Extract. Colocynthis Comp.* *Pil. Colocynth. Comp.* *Pilulæ
Colocynthis et Hyoscyami*.

CONFECTIO OPĪI. Confection of Opium. (*Pulveris Opii Compositi*
gr.c.; *Syrupi* gr.ccc.; mix.) Gr.xl. contain gr.j. of opium nearly.

Oper.—Narcotic and stimulant.

Use.—Atonic gout, flatulent colic, colliquative diarrhœa, in the chalk
mixture.

Dose.—Gr.v. to gr.xx. in a bolus or mixture.

CONFECTIO PĪPERIS. Confection of Pepper. (*Piperis nigri in pulverem subtilissimum reducti* unc.ij.; *Carui contriti* unc.iiij.; *Mellis depurati* unc.xv. Rub them well together in a mortar.) Substitute for Ward's Paste.

Prop.—Warm stimulant.

Use.—In hæmorrhoids.

Dose.—Gr.xl. to gr.cxx. and upwards.

CONFECTIO RŌSÆ CANĪNÆ. Confection of Hips. (*Rosæ Can. enucleatæ* lb.j.; *Sacch.* lb.ij. Beat the hips to a pulp, mix with sugar, and rub them together until they are well incorporated.)

Use.—Chiefly as a vehicle for other remedies.

CONFECTIO RŌSÆ GALLICÆ. Confection of Roses. (*Rosæ Gal. recentis* lb.j.; *Sacch.* lb.iiij. Beat the petals in a stone mortar, then add the sugar, and beat into a uniform mass.)

Oper.—Astringent, tonic.

Use.—In diarrhœa. Rubbed up with new milk, it is useful in early convalescence from acute diseases. A good vehicle.

Dose.—Gr.lx. or more.

Off. Prep.—*Pilula Aloes Barbadosensis.* *Pil. Aloes et Asafoetidæ.* *Pil. Aloes et Ferri.* *Pil. Aloes Socotrinæ.* *Pil. Ferri Carbonatis.* *Pil. Hydrargyri.* *Pil. Plumbi cum Opio.*

CONFECTIO SCAMMŌNĪI. Confection of Scammony. (*Scammonice Resinæ contritæ* unc.vj.; *Zingiberis contriti* unc.iiij.; *Olei Carui* fl.dr.ij.; *Ol. Caryophylli* fl.dr.j.; *Syr.* fl.unc.vj.; *Mellis depurati* unc.iiij. Rub the dry substances to a very fine powder, then rub them again with the syrup and honey; and add the oils.)

Oper.—Warm cathartic.

Dose.—Gr.x. to gr.xxx. or more, in a bolus.

CONFECTIO SENNÆ. Confection of Senna. (*Sennæ Fol. contrit.* unc.vij.; *Coriandri Fructus* unc.iiij.; *Ficorum* unc.xij.; *Tamarindi* unc.ix.; *Cassiæ pulpæ* unc.ix.; *Prun.* unc.vj.; *Ext. Glycyrr.* unc.j.; *Sacch. Purific.* unc.xxx.; *Aquæ Destill.* q.s.)

Oper.—Laxative.

Use.—In habitual constipation, and that attending pregnancy.

Dose.—Gr.lx. to gr.cxx.

CONFECTIO SULPHŪRIS. Confection of Sulphur. (*Sulphuris Sublimati* unc.iv.; *Potassii Tartrat. Acid. pulv.* unc.j.; *Syr. Aurant.* fl.unc.iv.; *Tragacanthæ* gr.xviij. Triturate all the ingredients in a mortar till they are well mixed.

Oper.—Laxative.

Use.—In hæmorrhoidal affections.

Dose.—Gr.lx. to gr.cxx.

CONFECTIO TĒRĒBINTHINÆ. Confection of Turpentine. (*Ol. Terebinthinæ* fl.unc.j.; *Glycyrrhizæ Radicis pulverizatæ* unc.j.; *Mellis* unc.ij. Rub the oil of turpentine with the powder, then add the honey, and beat them to a uniform consistence.

Oper.—Anthelmintic, purgative.

Use.—In cases of tænia, and also of ascarides.

Dose.—Gr.lx. to gr.cxx.

CŌNĪ FOLĪA ET FRUCTUS. Hemlock Leaves and Fruit. (*Conium maculatum.* N.O. *Umbelliferae.* Indigenous. ☉)

Comp.—Conine (C₈H₁₅N), resin, albumen, odorous oil, extractive.

Prop.—Broadly ovate, compressed laterally; half-fruit, with 5 waved or crenated ridges; odour heavy and disagreeable; taste bitter, nauseous, herbaceous; colour a dull green; light destroys its virtues, therefore the powder should be kept in opaque bottles, well corked. The powder, triturated with caustic potash, exhales the mouselike odour of conine.

Oper.—Sedative, narcotic; principally acting on nerves of motion, in large doses causing paralysis, poisonous in an overdose.

Use.—In rheumatism, neuralgia, pulmonary affections; as a palliative in carcinomatous, scrofulous, and syphilitic ulcerations and swellings; pertussis. Externally, unc.ij. of the dried herb boiled in Oj. of water, as a fomentation to open scrofulous and cancerous ulcers; or as a cataplasm by adding linseed meal and oatmeal.

Dose.—Gr.ij. to gr.viiij. of the powder, or from min.xxx. of the expressed juice very gradually increased to min.lx.

Off. Prep.—Leaves:—*Cataplasma Conii*. *Extractum Conii*. *Pil. Conii* *Comp.* *Succus Conii*. *Vapor Coniæ*. Fruit:—*Tinct. Conii*.

COPAÏBA. *Copaiva*. Oleo-resin obtained from incisions in the trunk. (*Copaifera Langsdorffii* and various species of *Copaifera*. N.O. *Leguminosæ*. Valley of the Amazon. 12)

Comp.—40 per cent. of volatile oil, $C_{10}H_{16}$, 52 of hard yellow resin (*Copaivic acid*, $C_{20}H_{30}O_2$), 2.18 of brown soft resin, 5.44 of water and loss.

Prop.—Odour peculiar, not unpleasant; taste pungent, bitter; consistence of olive oil; yellowish, transparent; soluble in two parts of alcohol, in ether, the expressed oils, and in an equal volume of benzol; miscible in distilled water by means of mucilage; sp. gr. from 0.940 to 0.993. It dissolves $\frac{1}{4}$ its weight of carbonate of magnesium, aided by gentle heat, and remains translucent. Does not become gelatinous after having been heated to 270°F. (132°C.) Is not fluorescent.

Oper.—Stimulant, diuretic, purgative in large doses; acts on the urethra and mucous membranes generally.

Use.—In gonorrhœa, gleet, leucorrhœa, chronic bronchitis, and hæmorrhoidal affections.

Dose.—Fl.dr.ss. to fl.dr.j. in emulsion with gum or yolk of egg; in pills by mixing the copaiba with magnesia and exposing the mixture to the air.

Incomp.—Nitric acid.

Test.—Agitate fl.dr.j. of solution of ammonia with fl.dr.ijss. of copaiba; if it remains milky when at rest, it contains castor oil.

Off. Prep.—*Oleum Copaibæ*.

COPAÏBÆ OLĒUM. See *Oleum Copaibæ*.

CORIANDRI FRUCTUS. Coriander Fruit, ripe and dried. (*Coriandrum sativum*. N.O. *Umbelliferae*. Italy. ☉)

Prop.—Odour aromatic; taste grateful, pungent; fruit globular, nearly as large as white pepper, consisting of two hemispherical mericarps closely united, beaked, finely ribbed, yellowish brown.

Oper.—Carminative.

Use.—In flatulence; but chiefly to cover the taste of other medicines.

Dose.—Gr.x. to gr.xxx. in powder.

Off. Prep.—*Confectio Sennæ*. *Oleum Coriandri*. *Syrupus Rhei*. *Tinct. Rhei*. *Tinct. Sennæ*.

CORIANDRI OLĒUM. See *Oleum Coriandri*.

CRĒĀSŌTUM. Creasote. (A product of the distillation of wood tar.)

Prop.—Colourless when recent; of a peculiar strong odour and burning taste; sp. gr. 1.071; soluble in alcohol, ether, glacial acetic acid, but sparingly in water; a slip of deal dipped in it, and afterwards into hydrochloric acid, acquires on a brief exposure to the air a greenish-blue colour. It turns the plane of polarisation of a ray of polarised light to the right. It is not solidified by the cold produced by a mixture of hydrochloric acid and sulphate of sodium; leaves no stain upon white paper when heated. A powerful stimulant. It coagulates albumen, dissolves most resins, and preserves animal substances (*κρέας* and *σώζω*).

Oper.—Irritant, narcotic, anodyne, styptic, antiseptic, stomachic, sedative.

Use.—Externally applied in rheumatism, toothache depending on carious teeth and neuralgia; as an astringent in hæmorrhage. Given in some stomachic affections, as a sedative to allay sickness, especially that of pregnancy, as a tonic, and externally in porrigo scutulata. The vapour mixed with that of hot water may be inhaled in chronic bronchitis, and to correct foetid expectoration.

Dose.—From min.j. to min.ijj.

Off. Prep.—*Mistura Creasoti. Unguentum Creasoti. Vapor Creasoti.*

CRĒTA. Chalk. Native friable carbonate of calcium.

Use.—In producing carbonic acid.

Off. Prep.—*Creta Præparata.*

CRĒTA PRÆPARĀTA. Prepared Chalk. (Chalk freed from most of its impurities by elutriation, and afterwards dried in small masses, which are usually of a conical form.)

Comp.— CaO, CO_2 .

Oper.—Internally antacid; externally absorbent.

Use.—In diarrhœa from acidity; externally when sprinkled over burns, after the inflammation has subsided, and a poultice has been applied, the healing of the sore is much hastened. Used also as an antidote in cases of poisoning by oxalic acid.

Dose.—Gr.x. to gr.lx. or more.

Off. Prep.—*Mistura Cretæ. Hydrargyrum cum Cretâ. Pulv. Cretæ Aromaticus. Pulv. Cretæ Aromaticus cum Opio.*

CRŌCUS. Saffron. The stigma and part of the style dried. (*Crocus sativus*. N.O. *Iridaceæ*. ♀) Imported from Spain, France, and Italy.

Prop.—Thread like styles, each terminated by 3 long orange-brown stigmas, broadest at the summit. Odour diffusive, aromatic, narcotic; taste aromatic, pungent bitter; colour deep orange-red (*polychroite*); yields its virtues to alcohol, wine, vinegar, and water.

Oper.—Stimulant, exhilarant, diaphoretic, emmenagogue.

Use.—In hysteria and other nervous affections, but principally as a colouring agent.

Dose.—Gr.v. to dr.ss.

Off. Prep.—*Dec. Aloes Comp. Pilula Aloes et Myrrhæ. Pulv. Cretæ Aromaticus. Tinct. Cinchonæ Comp. Tinct. Croci. Tinct. Opii Ammoniata. Tinct. Rhei.*

CUBĒBA. Cubebs. The unripe fruit dried. (*Piper Cubeba* (*Cubeba officinalis*). N.O. *Piperaceæ*. Java and Guinea. ♀)

Comp.—Volatile oil, peculiar principle *Cubebin*.

Prop.—The size of black pepper, globular, wrinkled, blackish, supported on a stalk of rather more than half its own length. Odour aromatic; taste cooling at first, afterwards pungent; active principle an essential oil.

Use.—In gonorrhœa and catarrh of the bladder, and in dysmenorrhœa.

Oper.—Stimulant, carminative, diuretic, purgative.

Dose.—From gr.xxx. to gr.cxx. of the powder, every six hours.

Off. Prep.—*Oleo-resina Cubebæ. Oleum Cubebæ. Tinctura Cubebæ.*

CUBEBÆ OLĒUM. See *Oleum Cubebæ*.

CŪPRI SUBACĒTAS. (Appendix, B.P.) *Ærugo. Verdigris.*

Comp.— $\text{Cu}(\text{C}_2\text{H}_3\text{O}_2)_2 \cdot \text{CuO}$.

Prop.—By the action of the fermenting marc of grapes on copper plates.

Prop.—Mass difficult to break, dry, not deliquescent; foliaceous, of a fine bluish-green colour; taste salt, metallic; completely soluble in sulphuric and hydrochloric acids; partially in water.

Oper.—Tonic, emetic, escharotic, detergent.

Use.—Scarcely ever used internally. Applied to the callous edges of sores, and to consume fungus, but now seldom used. A solution (gr. j. in an ounce of rose or elder-flower water) in scorbutic ulcerations of the mouth, but it cannot be recommended. It is used as a test for the presence of butyric acid in valerianate of zinc.

CŪPRI AMMŌNIO-SULPHĀTIS SOLŪTIO. Solution of Ammonio-sulphate of Copper. (Appendix II. B. P.) Ammoniated Copper. (*Cupri Sulphatis* unc.ss.; *Liquor. Ammoniac* q.s.; *Aque Destillatæ* q.s.) Add ammonia to the sulphate of copper, dissolved in fl.unc.viij. of water, until the precipitate first formed is nearly dissolved, clear the solution by filtration, and add distilled water, so that the bulk may be fl.unc.x. A clear deep blue solution with styptic metallic taste.

Oper.—Tonic, antispasmodic.

Use.—Formerly employed in epilepsy and chorea, after a course of purging; but introduced into Appendix II. B. P. as a test for sulphur in a strong solution of ammonia, and for arsenious acid.

Dose.—Gr. $\frac{1}{2}$ gradually increased to gr.iiij. in a pill twice a day.

Incomp.—Acids, alkalis, solution of lime.

CŪPRI NĪTRAS. Nitrate of Copper.

Comp.— $\text{Cu}(\text{NO}_3)_2 \cdot 3\text{H}_2\text{O}$.

Prop.—Deep-blue prismatic crystals, very deliquescent, with water changed to a styptic, caustic, corrosive fluid. Solution gives a maroon-red precipitate with ferrocyanide of potassium.

Oper.—Caustic.

Use.—As local application to syphilitic ulcers on tongue, fauces, &c.

CŪPRI SULPHAS. Sulphate of Copper. (May be obtained by heating sulphuric acid and copper together, dissolving the product in hot water, evaporating and crystallising.)

Comp.— $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$.

Prop.—Crystals rhomboidal, rich blue, semi-transparent, effervescent, inodorous; taste harsh, styptic, corrosive; soluble in 4 parts of water at 60° F. (15° C.), 2 of water at 212° F. (100° C.) The precipitate, which falls on the addition of ammonia, is redissolved if the ammonia is in excess. Its solution gives with chloride of barium a white precipitate insoluble in hydrochloric acid, and a maroon-red precipitate

pitate with ferrocyanide of potassium. If the solution of ammonia is added in excess to an aqueous solution, mixed with twice its volume of solution of chlorine, a sapphire-blue liquid remains without sediment.

Oper.—Tonic, emetic, astringent, escharotic.

Use.—In epilepsy, hysteria, intermittent fever, diarrhoea, and dysentery; to produce vomiting in incipient phthisis, in croup, and in poisoning; externally as a stimulant to ulcers, and to reduce fungus. A weak solution is sometimes used as a collyrium in ophthalmia, and as an injection in gleet. The following may be used in purulent ophthalmia of infants:—℞ Cupri sulph. gr.ij.; aquæ camphoræ fl.unc.v. Cola.

Dose.—Gr.¼ to gr.ij. in a pill, as an astringent; gr.v. to gr.x. in fl.unc.ij. of water, as an emetic.

Incomp.—Alkalis, earths, and their carbonates; borax; salts of lead; acetate of iron; acetate and subacetate of lead; astringent vegetable infusions, decoctions, and tinctures.

CŪPRUM. Copper in fine wire. Chemical symbol, Cu. Eq. 63·5.

Prop.—Odour peculiar, but sensib'le only when rubbed; taste disagreeable and metallic; colour red-yellow; sp. gr. 8·86; ductile; very malleable; hardness less than that of iron; easily oxidised.

Use.—For preparing the salts of the metal and spirit of nitrous ether,¹ and as a test of nitric and hydrochloric acids, also for detection of silver, also used in Reinsch's test for arsenic.

CURCŪMA. (Appendix, B.P.) The Rhizome of Turmeric. (*Curcuma longa*. N.O. *Zingiberaceæ*. India. ♀).

Prop.—Colour pale yellow; taste bitter and aromatic; odour slightly aromatic. It tinges the urine reddish after being taken for a short time.

Oper.—Stimulant, tonic.

Use.—In debilitated states of the stomach; intermittent fever; dropsy. But used chiefly as a test for alkalis.

Dose.—From gr.xxx. of the powder to gr.cxx.; three tablespoonfuls three times a day, of an infusion made with gr.clxxx. of the root in Oj. of water.

(*Turmeric Paper* (white unsized paper, steeped in tincture of turmeric, and dried by exposure to the air) and *Turmeric Tincture* (prepared by macerating an ounce of turmeric with 6 fl. oz. of rectified spirit for seven days, and then filtering) are both introduced into the Appendix B. P. as tests for the presence of alkalis.)

CUSPARIÆ CORTEX. Cusparia Bark. (*Galipea Cusparia*. N.O. *Rutaceæ*. South America. ♀)

Comp.—Contains 3·7 per cent. of bitter principle, *Cusparin*. It is distinguished from *false Cusparia* by its outer surface not turning green, nor its transverse fracture red. with nitric acid.

Prop.—Odour peculiar; taste intensely bitter, and slightly aromatic; pieces thin, externally grey, wrinkled; internally yellowish-fawn;

¹ Copper, when clean, produces no deleterious effects in the stomach; nor does it appear that the secretions it meets with there and in the bowels render it very active when in a mass. We have seen two instances where halfpence were swallowed, and retained, in the one case six months, and in the other two, without altering the state of health. Both the patients were boys under ten years of age; and the halfpence were much corroded when passed.

fracture short, resinous. Yields its virtues to water and proof spirit.

Oper.—Tonic stimulant, aromatic.

Use.—In dyspepsia, removing flatulence and acidity; chronic diarrhœa, dysentery, convalescence from low fever.

Incomp.—Sulphates of iron and copper, nitrate of silver, tartarated antimony, acetate and subacetate of lead, corrosive sublimate, caustic potash, and infusion of galls and yellow cinchona bark, &c.

Dose.—Gr.v. to gr.xx. in powder.

Off. Prep.—*Infusum Cuspariæ*.

CUSO. Kousso. The dried flowers and tops. (*Hagenia abyssinica* (*Brayera anthelmintica*). N.O. *Rosaceæ*. Abyssinia. l₂)

Comp.—Fatty oil, acrid resin, volatile oil, and a crystalline substance, *Kassin*.

Prop.—Flowers small, reddish-brown, on hairy stalks, outer limb of calyx five-parted, the segments oblong or oblong-lanceolate, reticulated; odour balsamic, taste acrid and unpleasant.

Oper.—Anthelmintic.

Use.—In cases of *tænia solium*, or *bothriocephalus latus*.

Dose.—Dr.ij. to unc.ss. infused for 15 minutes in fl.unc.x. of water with a little lemon juice for an adult; gr.xxx. to gr.cxx. for children.

Castor oil or some aperient should be taken after 4 or 6 hours.

Off. Prep.—*Infusum Cusso*.

DECOCTUM ALÖES COMPOSITUM. Compound Decoction of Aloes. (*Extracti Aloes Socot.* unc.ss.; *Myrrhæ, Croci, Potassii Carb.*, sing.dr.ij.; *Ext. Glycyrr.* unc.ij.; *Tinct. Card. Comp.* fl.unc.xv.; *Aquæ Destillatæ* q.s. Boil the aloes and myrrh, powdered, with the carbonate of potassium and liquorice, in a pint of distilled water for 5 minutes, then add the saffron, and, on cooling, the tincture; strain after 2 hours' maceration, allowing sufficient distilled water to pass through the strainer to make the mixture measure 50 ounces.)

Comp.—The soluble matter of the aloes and myrrh dissolved in water, which is enabled, by the alkali, to take up a little more than the water alone could do. The tincture keeps it unchanged. This decoction contains 4 gr. of extract of aloes in the ounce.

Oper.—A warm cathartic; emmenagogue.

Use.—In habitual constipation from torpor of the bowels; in jaundice, hypochondriasis, chlorosis, and dyspepsia.

Dose.—Fl.unc.ss. to fl.unc.ij. taken in the morning.

Incomp.—Acid and acidulous salts, metallic salts.

DECOCTUM CETRARİÆ. Decoction of Iceland Moss. (*Cetrariæ* unc.j.; *Aquæ Destill.* Oj. Steep the moss in cold water, and then boil for 10 minutes, and strain, pouring distilled water over the strainer till the product measures a pint.)

Comp.—Bitter, extractive, *cetraric acid*; a gelatinous matter, *lichenin*, and fecula, dissolved in water.

Prop.—Inodorous; taste bitter; mucilaginous; colour yellow.

Oper.—Tonic, demulcent.

Use.—In protracted coughs, phthisis, emaciation from the great discharge of ulcers, pertussis.

Dose.—Fl.unc.j. to fl.unc.iv. three or four times a day. The bitter is completely extracted by steeping the lichen in several waters before it is boiled, adding to each water about half a scruple of carbonate of potassium. Its nutritive qualities are considerable.

DECOCTUM CINCHONÆ. Decoction of Cinchona. (*Cinchonæ Rubric Cort. contritæ* unc. $1\frac{1}{4}$; *Aquæ Destill.* Oj. Boil for ten minutes in a covered vessel, and strain; when cold, pour over the strainer sufficient distilled water to make up a pint.)

Comp.—Cinchonine, quinine, and resinous extractive dissolved in water.

Prop.—Odour and taste of the bark.

Oper.—The same as that of the bark.

Use.—When the powder does not sit easy on the stomach, and when large doses are necessary, or ingredients of a nature which cannot be combined with the powder are required to be given with the bark.

Dose.—Fl.unc.j. to fl.unc.ij. three or four times a day.

Incomp.—Tartarated antimony, infusions of astringent barks, salts of iron, silver, and lead.

DECOCTUM GRANĀTI RADĪCIS. Decoction of Pomegranate Root. (*Granati Radicis concisæ* unc.ij.; *Aquæ Destillatæ* Oij. Boil to one pint, and strain.)

Prop.—Contains tannic acid, extractive, gum.

Oper.—Astringent, anthelmintic.

Use.—In tapeworm, dysentery.

Dose.—Fl.unc.ij. to fl.unc.iv.

DECOCTUM HÆMATOXYLI. Decoction of Logwood. (*Hæmatoxyli concisi* unc.j.; *Cinnamomi contriti* gr.℥v.; *Aquæ Destillatæ* Oj. Boil for ten minutes, adding the cinnamon towards the end, strain, and pour over the strainer sufficient distilled water to make the product measure a pint.)

Prop.—Taste sweetish, subastringent; nearly inodorous; colour deep red.

Oper.—Tonic, astringent.

Use.—In diarrhœa and some cases of dyspepsia, where the secretions of the intestines are acrid.

Dose.—Fl.unc.j. to fl.unc.ij. frequently.

Incomp.—The mineral acids, solution of alum, sulphates of iron and of copper, acetate of lead, tartarated antimony.

DECOCTUM HORDEÏ. Decoction of Barley. (*Hordei Sem.* unc.ij.; *Aquæ Destill.* Ojss. First wash the barley well, then boil it for twenty minutes, and strain; the product should be about one pint.)

Oper.—Nutritive, demulcent.

Use.—As a diluent in febrile affections, recent gonorrhœa, and strangury; and to form the bulk in enemata.

Dose.—Fl.unc.j. to fl.unc.iv.

DECOCTUM PAPAVERIS. Decoction of Poppy. (*Papar. contusi* unc.ij.; *Aquæ Destillatæ* Ojss. Boil for ten minutes, and strain, passing over the strainer sufficient distilled water to make up a pint.)

Comp.—Bimeconate of morphine, and the other soluble salts of opium, with mucilage, extractive, &c., in water.

Prop.—Anodyne, emollient.

Use.—As a fomentation in painful swellings, excoriations arising from the acrid discharge of ulcers, and those common to infants.

DECOCTUM PAREÏRÆ. Decoction of Pareira. (*Pareiræ contritæ* unc. $1\frac{1}{4}$; *Aquæ Destill.* Oj. Boil for fifteen minutes, and strain, pouring over the strainer sufficient distilled water to make up a pint.)

Comp.—Peculiar uncrystallisable principle (*Cissampelin*), soft resin, tannin, starch.

Oper.—Slightly tonic and diuretic.

Dose.—Fl.unc.j. to fl.unc.ij.

DECOCTUM QUERCÛS. Decoction of Oak Bark. (*Quercûs Cort.* unc.1½; *Aquæ Destillatæ* Oj. Boil for ten minutes, and strain, pouring over the strainer sufficient distilled water to make up a pint.)

Oper.—Astringent.

Use.—As an injection in leucorrhœa, and the gleet discharge which frequently remains after miscarriages; a fomentation in unhealthy ulcer; an application to warts.

Incomp.—Decoction of cinchona; gelatine; metallic salts; alkalis destroy its astringency.

DECOCTUM SARSÆ. Decoction of Sarsaparilla. (*Sarsæ* unc.ijss.; *Aq. Destill.* Ojss. Digest the sarsaparilla in water for an hour; then boil for ten minutes in a covered vessel, strain, and cool. The product should be made to measure a pint by pouring sufficient distilled water over the strainer.)

Comp.—*Smilacin*. Acrid bitter resin, lignin, starch, and mucilage.

Prop.—Inodorous; taste bitter, glutinous.

Oper.—Alterative; slightly diaphoretic and tonic; a demulcent.

Use.—In the sequelæ of syphilis, after a mercurial course.

Dose.—Fl.unc.ij. to fl.unc.x. twice or thrice a day, alone or with milk.

Incomp.—Solution of lime, acetates of lead.

DECOCTUM SARSÆ COMPŎSĪTUM. Compound Decoction of Sarsaparilla. (*Sarsæ* unc.ijss.; *Sassafras Rad. concisæ*, *Guaiaci Ligni dersi*, *Glycyrr. recentis cont.*, sing. unc.¼; *Mezerei gr.lx.*; *Aquæ Destillatæ ferventis* Ojss. Proceed as in the simple decoction.)

Oper.—Diaphoretic, alterative.

Use.—The same as the former; in secondary syphilis, chronic rheumatism, and lepra.

Dose.—Fl.unc.ij. to fl.unc.x. twice or thrice a day.

* * This preparation is similar to the celebrated *Lisbon Diet Drink*.

DECOCTUM SCOPĀRĪI. Decoction of Broom. (*Scoparii* unc.j.; *Aquæ Destillatæ* Oj. Proceed as in the former decoctions.)

Oper.—Diuretic.

Use.—In dropsy.

Dose.—Fl.unc.j. to fl.unc.iv.

DECOCTUM TARAXĀCI. Decoction of Dandelion. (*Taraxaci concisi et contusi* unc.j.; *Aquæ Destill.* Oj. Boil for ten minutes, and proceed as above.)

Prop.—Taste bitter.

Oper.—Purgative, diuretic, tonic.

Use.—In dropsies, and deficient and irregular action of the hepatic organs.

Dose.—Fl.unc.ij. to fl.unc.iv. twice or thrice a day.

DIGITĀLIS FOLĪA. Foxglove Leaves, dried. (*Digitalis purpurea*. N.O. *Scrophulariaceæ*. Indigenous. ♂)

Botanical Characters.—Stem erect, three to four feet high, with purplish hue; leaves large, veiny, ovate-lanceolate, crenate, shortly petiolate, rugose, downy, purplish on their under surface. Flowers numerous, purple, spotted within, drooping in very long spikes. The leaves are gathered from wild British plants of the second year's growth

when about two-thirds of the flowers are expanded; the midrib and stalk being removed, they are dried in a dark place.

Prop.—Inodorous; taste acrimonious, bitter, nauseous; injured by light, both in colour and virtues. Its action depends on the presence of Digitalin.

Oper.—Sedative, diminishing the velocity and force of the pulse, and lessening cardiac irritability; diuretic. In overdoses it occasions vomiting, purging, dimness of sight, vertigo, delirium, hiccough, convulsions, and death. These symptoms of poisoning may come on suddenly, owing to the cumulative action of the drug, and they are best obviated by the recumbent posture, by stimulants, opium, and blisters.

Use.—In disease of the heart and large vessels; in insanity and epilepsy. In inflammatory diseases; phthisis; active hæmorrhages; and dropsies; frequently combined with nitric acid in dropsies which occur after long and harassing courses of mercury; most useful in the earlier conditions resulting from valvular disease. It has also been recommended in the form of tincture, in doses of fl.unc.ss., in cases of delirium tremens. When nausea occurs, its use must be intermitted for a little time; but we are not of opinion that purging counteracts its desired effects; for, although the kidneys may not act so powerfully, yet the body is unloaded of the morbid fluid by the intestines. Its use may be followed by a generous diet and tonics; and during its employment diluents are necessary.

Dose.—Gr.ss. to gr.jss. in a pill, united with ammoniacum, squill, soap, calomel, or opium, every six or eight hours, till irregularity of the pulse or other signs of its cumulative effect occur, when it must be discontinued, and the intervals extended; but it may again be given after a further interval.

Off. Prep.—*Infusum Digitalis*. *Tinct. Digitalis*.

ECBALLII FRUCTUS. Squirting Cucumber Fruit, very nearly ripe. (*Ecballium Elaterium*. N.O. *Cucurbitaceæ*. South of Europe. ☉)

Off. Prep.—*Elaterium*.

ELATERINUM. Elaterin. Active principle of elaterium. (By exhausting elaterium with chloroform, precipitating and washing with ether, and recrystallising from solution in chloroform.)

Comp.— $C_{20}H_{28}O_5$.

Prop.—Small colourless crystals with bitter taste; insoluble in water.

When dissolved in melted carbolic acid, and treated with sulphuric acid, it becomes crimson and then scarlet.

Oper.—Purgative.

Use.—As *Elaterium*, but more constant in its action.

Dose.—Gr. $\frac{1}{40}$ to gr. $\frac{1}{10}$.

Off. Prep.—*Pulvis Elaterini Comp.*

ELATERYUM. *Elaterium*. *Syn.* *Extractum Elaterii*. Sediment from the juice of the Squirting Cucumber fruit.

Comp.—*Elaterin*, bitter principle, fecula, chlorophyll.

Prop.—In light, friable, slightly incurved cakes, about a line in thickness; inodorous; taste bitter, acrid, of a pale greyish-green or yellowish-grey colour. Does not effervesce with acids; yields half its weight to boiling rectified spirit. The concentrated solution added to warm solution of potash yields on cooling not less than 20 per cent. of elaterin in colourless crystals. A concentrated alcoholic

solution poured into hot diluted solution of potash deposits minute silky white crystals 1-7th the weight of the elaterium.

Oper.—Violently cathartic; hydragogue.

Use.—In dropsies.

Dose.—Gr. $\frac{1}{16}$ to gr. $\frac{1}{2}$ in a pill.

Off. Prep.—*Elaterinum*.

ELĚMI. Manila Elemi. A concrete resinous exudation. (*Canarium commune*? N.O. *Amyridaceæ*. Manila. 12)

Comp.—Resin, volatile oil.

Prop.—Odour fragrant, strong; taste bitter. In large solid masses of a yellow and greenish colour, semi-transparent; fusible, soluble in alcohol, partly also in essential oil.

Oper.—Stimulant.

Use.—Scarcely ever used internally; but chiefly for forming a pleasant stimulating ointment, for promoting the discharge from blisters, issues, and setons.

Off. Prep.—*Unguentum Elemi*.

EMPLASTRUM AMMŌNĪĀCI CUM HYDRARGYŔRO. Ammoniacum and Mercury Plaster. (*Ammoniaci* unc.xij.; *Hydrarg.* unc.ij.; *Olei Olivæ* gr.lvj.; *Sulphuris Sublim.* gr.viiij. Add the sulphur to the oil heated, stirring constantly until they combine. then rub the mercury with them until the globules disappear; lastly, add the ammoniacum melted, and mix.)

Oper.—Resolvent, discutient.

Use.—To indurated glands, nodes, tophi, bronchocele, and indolent tumours.

EMPLASTRUM BELLADONNÆ. Plaster of Belladonna. (*Extracti Belladonnæ Alcoholici* unc.iv.; *Empl. Resinæ*, *Empl. Saponis*, āā unc.viiij. Mix the plasters by the heat of a water-bath, then add the extract, and mix the whole thoroughly together.)

Oper.—Sedative, anodyne.

Use.—In chronic rheumatism, and local pains; dysmenorrhœa; painful affections of the heart, uterus, &c.

EMPLASTRUM CALĚFACIENS. Warming Plaster. *Syn.* Warm Plaster. (*Cantharidis contritæ*, *Olei Myristicæ Expr.*, *Ceræ Flavæ*, *Resinæ*, sing. unc.iv.; *Empl. Saponis* lb.ij.; *Empl. Resinæ* lb.iiij $\frac{1}{2}$; *Aquæ ferventis* Oj. To the evaporated aqueous extract of cantharides add the other ingredients, and melt in a steam or water bath.)

Oper.—Calefacient, rubefacient, stimulant.

Use.—In catarrh, pertussis, inflammatory affections of the chest, and sciatica.

EMPLASTRUM CANTHĀRĪDIS. Cantharides Plaster. (*Cantharidis in pulv. sublt.* unc.xij.; *Ceræ Flavæ*, *Sevi*, āā unc.vijss.; *Resinæ* unc.iiij.; *Adipis* unc.vj. First melt the resin, then the wax, suet, and lard, and as the mixture becomes thick in cooling, sprinkle in the flies, and mix.)

Oper.—Epispastic.

Use.—In every case where blisters are required. Heat destroys the activity of the flies, and therefore this plaster fails when incautiously prepared. It should be spread on leather, for a plaster, with the thumb, and never with a hot spatula; perhaps the most certain mode of raising blisters would be to sprinkle the finely powdered flies on some farinaceous paste, as suggested by Parmentier. In using this

plaster, the part which it is to cover should be bathed with vinegar, and a piece of thin gauze pressed down on the surface of the plaster interposed between it and the skin, by which means it is easily and cleanly removed. It requires to remain applied twelve hours in order to produce a perfect blister. But in a child, after any debilitating disease, especially measles, it ought to be taken off after three, four, or six hours, and a bread and water poultice applied, when in due time a good blister will be the consequence, without any tendency to sloughing.

EMPLASTRUM FERRI. Chalybeate Plaster. (*Ferri Peroxidi* unc.j.; *Empl. Plumbi* unc.viiij.; *Picis Burg.* unc.ij. Melt the plaster with the Burgundy pitch, then add the peroxide, and mix.)

Oper.—Strengthening, stimulant.

Use.—In muscular relaxations; and in weaknesses of the joints after sprains. In lumbar weaknesses and pains of women. It acts chiefly in giving a mechanical support, by its stiffness and adhesive quality.

EMPLASTRUM GALBANI. Galbanum Plaster. (*Galbani* unc.j.; *Ammoniæ* unc.j.; *Ceræ Flavæ* unc.j.; *Empl. Plumbi* unc.viiij. Melt the galbanum and ammoniacum together, then add the lead plaster and yellow wax previously melted, and mix.)

Oper.—Stimulant, suppurative.

Use.—To scrofulous tumours, old arthritic joints; and to the lumbar region in rickets. For the purposes of a discutient in discharged abscesses, when induration remains.

EMPLASTRUM HYDRARGYRI. Mercurial Plaster. (*Hydrarg.* unc.iiij.; *Olei Olivæ* gr.lvj.; *Emplastri Plumbi* unc.vj.; *Sulphuris Sublimati* gr.viiij. Having heated the oil, add the sulphur, and rub in the mercury till no globules remain, then mix the whole with the melted lead plaster.)

Oper.—Stimulant, resolvent, discutient.

Use.—To buboes and venereal tumours; nodes, when not painful to the touch; and indurations; and to joints affected with syphilitic pains.

EMPLASTRUM OPII. Opium Plaster. (*Opii pulverizati* unc.j.; *Empl. Resinæ* unc.ix. Melt the resin in a steam or water bath, and add the opium.)

Oper.—Anodyne, stimulant.

Use.—Against internal pains.

EMPLASTRUM PICIS. Pitch Plaster. (*Picis Burgundicæ* unc.xxvj.; *Thuris* unc.xiiij.; *Resinæ*, *Ceræ Flavæ*, ãã unc.ivss.; *Olei Myristicæ Expressi* unc.j.; *Olei Olivæ*, *Aquæ*, ãã fl.unc.ij. To the pitch, resin, and wax melted together, add the other matters, and evaporate to a proper consistence.)

Oper.—Stimulant, rubefacient.

Use.—In catarrh, and other pulmonary affections, applied to the chest; and to the temples in pains of the head, and chronic ophthalmia. When any serous exudation takes place, the plaster should be frequently renewed.

EMPLASTRUM PLUMBI. Lead Plaster. (*Plumbi Oxidi* lb.v.; *Olei Olivæ* lb.x.; *Aquæ* lb.v. Boil together over a slow fire, stirring constantly until the oil and oxide of lead form a plaster.)

Comp.—Oxide of lead, and oil so changed as to approximate to the nature of volatile oil. The water is evaporated.

Oper.—Defensive, slightly adhesive.

Use.—In excoriations; as a defence in slight wounds, and to retain their edges together; as a covering to corns, and to form a basis of some other plasters.

Off. Prep.—*Emp. Ferri. Emp. Galbani. Emp. Hydrargyri. Emp. Plumbi Iodidi. Emp. Resinæ. Emp. Saponis.*

EMPLASTRUM PLUMBI IODIDI. Iodide of Lead Plaster. (*Plumbi Iodidi* unc.ij.; *Empl. Plumbi* lb.j.; *Resinæ* unc.ij. Add the iodide of lead in fine powder to the plaster and resin previously melted, and mix them intimately.)

Oper.—Resolvent, mildly stimulant, sedative.

Use.—In cases of scrofulous tumours and large scrofulous joints.

EMPLASTRUM RESINÆ. Resin Plaster. *Syn.* Adhesive Plaster. (*Resinæ* unc.iv.; *Empl. Plumbi* lb.ij.; *Saponis Animalis* unc.ij. Melt the plaster with a gentle heat, then add the resin and soap, and mix.)

Oper.—Defensive, adhesive, slightly stimulant.

Use.—In retaining the lips of recent wounds together, that they may heal by the first intention; and to give support to ulcerated parts, to assist their granulation, without rest. The plaster originally prepared by Mr. Baynton contained less resin, gr.cccxl. only to lb.j. of the lead plaster. This preparation, however, answers the purpose equally well, except in very irritable habits.

Off. Prep.—*Emplastrum Belladonnæ. Empl. Calefaciens. Empl. Opii.*

EMPLASTRUM SAPONIS. Soap Plaster. (*Saponis Animalis* unc.vj.; *Emplast. Plumbi* lb.ij $\frac{1}{2}$; *Resinæ* unc.j. Mix the soap and resin with the melted plaster; and evaporate to a proper consistence.)

Oper.—Mildly discutient.

Use.—Applied to lymphatic tumours; and used in the same class of cases as the mercurial plaster, but with much less effect.

Off. Prep.—*Emplastrum Calefaciens.*

EMPLASTRUM SAPONIS FUSCUM. Brown Soap Plaster. *Syn.* Emplastrum Cerati Saponis. (*Saponis Animal.* unc.x.; *Ceræ Flavæ* unc.xijss.; *Ol. Olivæ* Oj.; *Plumbi Oxidi* unc.xv.; *Aceti* cong.j. Boil together the vinegar and oxide of lead, stirring until they combine; add the soap and boil again until the water is evaporated; lastly mix in the oil and wax melted together.)

Oper.—Protective, sedative.

Use.—Employed round fractured limbs, after all inflammation is abated and the bones are united; and to strumous swellings.

ENĒMA ALOES. Enema of Aloes. (*Aloes* gr.xl.; *Potassii Carbonatis* gr.xv.; *Mucilag. Amyli* Oss. Mix and rub together.)

Use.—As a stimulant cathartic in amenorrhœa; and for dislodging ascarides.

ENĒMA ASAFŒTIDÆ. Enema of Asafœtida. (*Asafœtidæ* gr.xxx.; *Aquæ Destillatæ* fl.unc.iv. Rub the asafœtida in a mortar with the water added gradually so as to form an emulsion; or it may be conveniently and quickly prepared by mixing 6 fl.drachms of tincture of asafœtida with 6 fl.unc. of mucilage of starch.)

Oper.—Antispasmodic, vermifuge.

Use.—In hysteria, spasmodic colic, in some diseases of children, also in pertussis.

ENĒMA MAGNĒSII SULPHĀTIS. Enema of Sulphate of Magnesium. (*Ol. Olivæ* fl.unc.j.; *Magnesiæ Sulph.* unc.j.; *Mucilag. Amyli* fl.unc.xv.)

Use.—This is a good, gently stimulating, and emollient clyster; but it does not possess any peculiar advantage over those which are every day ordered in extemporaneous prescriptions.

ENĚMA OPĚI. Enema of Opium. (*Tincturæ Opii* fl.dr.ss.; *Mucilag. Amyli* fl.unc.ij.)

Use.—In irritable bladder, diseases of the prostate gland, and dysentery; in the diarrhœa of typhoid fever, phthisis, &c.; and strangury from blisters.

ENĚMA TERĚBINTHĚNÆ. Enema of Turpentine. (*Olei Terebinthinæ* fl.unc.j.; *Mucilag. Amyli* fl.unc.xv.)

Use.—In affections of the urinary organs, intestinal worms, especially tænia; in spasmodic affections, as chorea; in tympanites of fever; in peritoneal inflammation, especially of puerperal peritonitis.

ERGŎTA. Ergot. (The sclerotium (compact mycelium or spawn) of *Claviceps purpurea*, produced between the pales, and replacing the grain of common rye, *Secale cereale*. Europe.)

Prop.—Subcylindrical, or obscurely triangular, curved, with a longitudinal furrow on the concave side, obtuse at the ends, from $\frac{1}{2}$ of an inch to $1\frac{1}{2}$ inch in length; violet-coloured body, pinkish within; fracture short; odour unpleasant, especially if the powder is triturated with solution of potash; taste mawkish and rancid.

Comp.—The active ingredient has not been satisfactorily separated from the extract. According to Kobert three active principles are present in ergot, viz. *Ergotinic Acid*, *Sphacelinic Acid*, and an alkaloid *Cornutine*.

Oper.—Stimulant, acting chiefly on the muscular system of the uterus, and also probably on the extreme arteries, causing, when taken for a long continuance, gangræna senilis.

Use.—In parturition when the pains languish, and the uterine action becomes torpid, provided the os uteri be fully dilated, and the membranes ruptured. It is mostly employed to prevent or control post-partum hæmorrhage. In leucorrhœa. In passive hæmorrhages.

Dose.—Gr.xx. to gr.xxx. in cases of parturition; gr.v. to gr.x. in leucorrhœa or atonic hæmorrhage three or four times a day.

Off. Prep.—*Extractum Ergotæ Liquidum*. *Infusum Ergotæ*. *Tinct. Ergotæ*.

ERGOTINUM. Ergotin. A purified extract, commonly called Boujean's Ergotine. (*Extr. Ergot. Liq.* fl.unc.iv.; *Spirit. Rectif.* fl.unc.iv.)

Oper. & Use.—Similar to Ergot.

Dose.—Gr.ij. to gr.v.

Off. Prep.—*Injectio Ergotini Hypodermica*.

ESSENTIA ANĚSI. Essence of Anise. (*Olei Anisi* fl.unc.j.; *Spir. Rectificati* fl.unc.iv. Mix.)

Oper.—Aromatic, stimulant. carminative.

Use.—In flatulence, and in the diarrhœa of infants.

Dose.—Min.x. to min.xx.

ESSENTĚA MENTHÆ PIPERITÆ. Essence of Peppermint. (*Olei Menthæ Piperitæ* fl.unc.j.; *Spiritus Rectificati* fl.unc.iv. Mix.)

Oper.—Aromatic, stimulant, carminative.

Use.—In nausea, cardialgia, flatulence, colic, &c.

Dose.—Min.x. to min.xx.

EXTRACTUM ACONITI. Extract of Aconite. (*Aconiti Fol. recent.* lb.cxij. Bruise in a stone mortar, press the juice out, and evaporate to a proper consistence for forming pills, with due regard to temperature; the green colouring matter, first separated, is added before the final evaporation.)

Prop.—Odour disagreeable; taste acrid, slightly styptic; colour obscure green or brownish-red. It loses its virtues when long kept.

Oper.—Narcotic, anodyne, diuretic.

Use.—In chronic and even acute rheumatism, neuralgia, and ague; glandular swellings, convulsions; and also acute uterine hæmorrhages, and externally to relieve rheumatic and neuralgic pains.

Dose.—Gr. $\frac{1}{4}$ night and morning, gradually increased to gr. j., in the form of pills. But its internal use must be recommended with the greatest caution.

EXTRACTUM ALÖES BARBADENSIS. Extract of Barbadoes Aloes. (*Aloes Barbadosis* lb.j.; *Aque Destillatæ ferventis* cong.j. Stir until well mixed, macerate for twelve hours, strain and evaporate the liquid to dryness.)

Prop.—Purgative.

Use.—As aloes.

Dose.—Gr. ij. to gr. vj.

EXTRACTUM ALÖES SOCOTRINÆ. Extract of Socotrine Aloes. (*Aloes Socotrinæ* lb.j.; *Aque Destillatæ ferventis* cong.j. The gummy part extracted by boiling water, the extract allowed to deposit and then inspissated.)

Prop.—Almost inodorous; taste bitter, but less unpleasant than aloes.

Oper.—Cathartic, emmenagogue.

Use.—In the same cases for which aloes is used.

Dose.—Gr. ij. to gr. vj. in pills.

Off. Prep.—*Decoctum Aloes Compositum.* *Extract. Coloc. Comp.*

EXTRACTUM ANTHEMIDIS. Extract of Chamomile. (*Anthemidis Florum* lb.j.; *Aque Destillatæ* cong.j.; *Olei Anthemidis* min.xv. Add the oil to the extract obtained by evaporating the infusion.)

Prop.—Almost inodorous; taste a pure grateful bitter; colour dark brown.

Oper.—Tonic, stomachic.

Use.—In dyspepsia, chlorosis, and general debility.

Dose.—Gr. ij. to gr. x. in pills, twice or thrice a day.

EXTRACTUM BÊLÆ LIQUIDUM. Liquid Extract of Bael. (*Belæ Fruct.* lb.j.; *Aque Destillatæ* Oxij.; *Spir. Rect.* fl.unc. iij. Macerate, and after filtration evaporate to thirteen ounces, and when cold add the spirit.)

Prop.—Bitter.

Oper.—Astringent, and in some degree sedative.

Use.—In dysentery and diarrhœa, and in atonic conditions of the mucous membrane of the stomach and intestines.

Dose.—Fl.dr.j. to fl.dr.ij.

EXTRACTUM BELLADONNÆ. Extract of Belladonna. (An expressed juice inspissated. Prepared as the *Extractum Aconiti.*)

Prop.—Inodorous; taste bitterish.

Oper.—Narcotic, but said to act as an antidote to opium; it is used in the same cases as the plant; employed with great advantage in

many cases of incontinence of urine; principally, however, locally, to produce dilatation of the pupil in iritis, &c.

Dose.—Gr. $\frac{1}{4}$ gradually increased to gr. j. in pills.

EXTRACTUM BELLĀDONNÆ ALCOHOLĪCUM. Alcoholic Extract of Belladonna. (Prepared by percolating powdered belladonna root with rectified spirit, and evaporating the extract to a suitable consistence.)

Oper.—Similar to extract of belladonna, but more powerful.

Use.—As extract of belladonna, but mainly as local sedative.

Dose.—Gr. $\frac{1}{8}$ to gr. $\frac{1}{4}$.

Off. Prep.—*Emplastrum Belladonnæ. Unguentum Belladonnæ.*

EXTRACTUM CALUMBÆ. Extract of Calumba. (An evaporated aqueous extract.)

Oper.—Tonic and stomachic.

Use.—In debility of digestive organs, in non-inflammatory gastrodynia, pyrosis.

Dose.—Gr. ij. to gr. x.

EXTRACTUM CANNĀBIS INDĪCÆ. Extract of Indian Hemp. (*Cannabis Indicæ* lb. j.; *Spir. Rectif.* Oiv. Macerate the hemp in the spirit; and when the dregs have subsided, decant the clear liquid, and evaporate by means of a water-bath to the consistence of a soft extract.)

Oper.—Narcotic; in small doses it exalts the mental powers, and in larger it causes delirium; it does not dilate the pupil.

Use.—Neuralgia, tetanus, hydrophobia, chorea, chronic rheumatism.

Dose.—Gr. $\frac{1}{4}$ to gr. j.

Off. Prep.—*Tinctura Cannabis Indicæ.*

EXTRACTUM CASCARÆ SAGRĀDÆ. Extract of Cascara Sagrada. *Syn.* Extractum Rhamni Purshiani. (By macerating with proof spirit, and subsequently percolating and evaporating.)

Oper.—Mild purgative and intestinal stimulant.

Use.—In chronic constipation it is said to produce one soft painless motion daily. On gradually diminishing the dose employed the habit of regularity may be re-established.

Dose.—Gr. ij. to gr. viij.

EXTRACTUM CASCARÆ SAGRĀDÆ LĪQUĪDUM. Liquid Extract of Cascara Sagrada. *Syn.* Extractum Rhamni Purshiani Liquidum. (*Rhamni Pursh.* lb. j.; *Spirit. Rectif.* fl.unc. iv.; *Aq. Destill.* q.s. Exhaust the bark by boiling with water; evaporate the strained liquid to twelve fl.oz.; when cold add the spirit, filter, and make up to sixteen fl.oz. with distilled water.)

Oper. & Use.—Similar to the solid extract.

Dose.—Fl.dr.ss. to fl.dr.ij.

EXTRACTUM CĪMĪCĪFŪGÆ LĪQUĪDUM. Liquid Extract of Cimicifuga. (*Cimicifugæ* unc. xx.; *Spiritus Rect.* q.s. By maceration, evaporation to a soft consistence, and subsequent addition of spirit to produce twenty fl.oz.)

Oper.—Tonic, expectorant, antirheumatic.

Use.—In acute rheumatism and in bronchitis.

Dose.—Min. iij. to min. xxx.

EXTRACTUM CINCHŌNÆ LĪQUĪDUM. Liquid Extract of Cinchona. (*Cinchonæ Rubræ Cort.* unc. xx.; *Acidi Hydrochlor.* fl.dr.v.;

Glycerini fl.unc. ijss.; *Spirit. Rect., Aquæ Destill.*, āā q.s. Macerate the bark in 5 pints of water with the glycerine and acid, percolate, evaporate, and add rectified spirit.)

Comp.—Every 100 fl. grains contains 5 grains of the alkaloids of the bark.

Prop.—Odour sweetish; taste bitter, but less austere than the bark; colour deep brown, and if the temperature be strictly attended to, it is a most valuable preparation.

Oper.—The same as the bark in substance, and consequently it is used in the same cases.

Dose.—Min.v. to min.x.

EXTRACTUM CŌCÆ LĪQUĪDUM. Liquid Extract of Coca. (*Cocce* unc.xx.; *Spirit. Tenuior.* q.s. By maceration, percolation, evaporation to a soft consistence, and addition of proof spirit to make twenty fl.oz.)

Oper.—Tonic, stimulant.

Use.—As a tonic to the nervous system in old people.

Dose.—Fl.dr.ss. to fl.dr.ij.

EXTRACTUM COLCHĪCI. Extract of Colchicum. (Prepared in the same manner as the *Extractum Aconiti*.)

Comp.—*Colchicin*, gum, starch, lignin, and traces of veratrine.

Oper.—Purgative, narcotic.

Use.—In gout and acute rheumatism.

Dose.—Gr.ss. to gr.ij. repeated every four or six hours.

EXTRACTUM COLCHĪCI ACĒTĪCUM. Acetic Extract of Colchicum. (*Colchici Cormi recentis decorticati* lb.vij.; *Acidi Acetici* fl.unc.vj. Bruise the corms, gradually sprinkling them with the acid; then express the juice, heat to 212° F. (100° C.), strain and evaporate by a water-bath at a temperature not exceeding 106° F. (71° C.) to the consistence of a soft extract.)

Comp.—Acetate of colchicin, &c.

Oper.—Diuretic, narcotic.

Use.—In gout, acute rheumatism, biliary congestion, and diseases of excitement.

Dose.—Gr.ss. to gr.ij. twice or thrice a day.

Incomp.—Alkalis and their carbonates, magnesia, solution of lime.

EXTRACTUM COLŌCYNTHĪDĪS COMPOŚĪTUM. Compound Extract of Colocynth. (*Colocynthidis Pulpæ* unc.vj.; *Extracti Aloes Socotrinæ* unc.xij.; *Scammonice Resinæ* unc.iv.; *Saponis Animalis contriti* unc.iiij.; *Cardamomi Seminum ad pulverem subtilissimum reductorum* unc.j.; *Spir. Ten.* cong.j. Macerate the colocynth in the spirit, press out the tincture, distil off the spirit, and add the soap, scammony, and extract of aloes, evaporate, and finally add the cardamoms.)

Oper.—Cathartic, mild in its operation, and not apt to occasion gripings.

Use.—For evacuating the bowels; and as an adjunct to other purgatives.

Dose.—Gr.iiij. to gr.x. in pills at bed-time.

EXTRACTUM CŌNĪI. Extract of Hemlock. (An expressed juice inspissated; the green colouring matter, first separated, is added before the final evaporation.)

Comp.—Conine, extractive, mucilage, volatile oil, chlorophyll.

Prop.—Odour disagreeable; taste bitterish and saline; colour dark olive; it loses its virtue when kept, and a saline efflorescence appears on its surface.

Oper.—Narcotic, alterative, resolvent.

Use.—In chest affections, scrofula, and cancer, particularly for allaying the pain of uterine cancer, without producing constipation, as opium does; a useful addition to mercurial salts in cutaneous complaints.

Dose.—Gr.ij. gradually increased to gr.vj. or more, twice or thrice a day.

Test.—Triturate with solution of potash: if good, a strong mouse-like odour of conine is evolved.

Off. Prep.—*Pilula Conii Comp.*

EXTRACTUM ERGOTÆ LIQUIDUM. Liquid Extract of Ergot. (*Ergotæ contrit.* lb.j.; *Aquæ Destillatæ* Ovj.; *Spiritus Rectificati* fl.unc.vj.) Prepared by percolation. It is an aqueo-spirituuous extract. Each fl.oz. contains one oz. of ergot.

Oper.—Stimulant and astringent, acting on the small arteries and the muscles, especially of the uterus.

Use.—In parturition, when the pains languish, and the uterine action becomes torpid, provided the os be fully dilated and the membranes ruptured. Used to prevent post-partum hæmorrhage. Also sometimes in leucorrhœa and passive hæmorrhages.

Dose.—Min.x. to min.xxx.

Off. Prep.—*Ergotinum.*

EXTRACTUM FILICIS LIQUIDUM. Liquid Extract of Male Fern. (*Filicis contritæ* lb.ij.; *Ætheris Oliv.* vel q.s. Prepared by percolation, and afterwards by evaporation and distillation.)

Oper.—Anthelmintic.

Use.—In tænia lata and solium, and bothriocephalus latus.

Dose.—Min. xv. to min.xxx., to be given in the early morning after several hours' fast. It sometimes requires to be followed by a purgative. The dose ordered in the B.P. may often be largely increased with advantage.

EXTRACTUM GELSĚMII ALCOHOLICUM. Alcoholic Extract of Gelsemium. (By maceration with rectified spirit, percolation, and evaporation.)

Oper.—Sedative.

Use.—In neuralgia of the fifth nerve, especially in migraine and tic. Also in laryngitis, pleurisy, pneumonia, and spasmodic asthma.

Dose.—Gr.ss. to gr. ij. in pill.

EXTRACTUM GENTIÂNÆ. Extract of Gentian. (Macerate one pound of sliced gentian in a gallon of boiling distilled water; pour off the liquor, strain, and evaporate.)

Comp.—Gentianite, its bitter principle, gentianin or gentianic acid, mucilage, sugar.

Prop.—Inodorous, intensely bitter, black, shining, tenacious.

Oper.—Tonic, stomachic: in large doses aperient.

Use.—In dyspepsia, jaundice, &c., but it is chiefly used as a medium for giving the metallic oxides in the form of pills: an excellent adjunct to ipecacuanha in the later stage of dysentery.

Dose.—Gr.ij. to gr.x. twice or thrice a day.

EXTRACTUM GLYCYRRHIZÆ. Extract of Liquorice. (Macerate for twenty-four hours lb.j. of liquorice root in coarse powder in four pints of distilled water; percolate, strain, and then evaporate.)

Prop.—Almost inodorous; taste sweet, mucilaginous; brittle.

Oper.—Demulcent.

Use.—In the tickling cough of catarrh it is perhaps the most useful of the demulcents, as it hangs about and sheaths the fauces.

Dose.—Gr.v. to gr.lx. or ad libitum.

Off. Prep.—*Confectio Sennæ. Decoctum Aloes Compositum. Tinctura Aloes. Trochisci Opii.*

EXTRACTUM GLYCYRRHIZÆ LIQUIDUM. Liquid Extract of Liquorice. (*Radix Glycyrrhizæ crasse contritæ* lb.j.; *Aquæ Destillatæ* Oiv. *Spirit. Rect.* q.s. Macerate, strain, and evaporate by water-bath until the extract has acquired, when cold, a sp. gr. of 1.160, then add one-sixth of its volume of rectified spirit, and filter after 12 hours.

Prop.—Almost inodorous; taste sweet and mucilaginous.

Oper.—Demulcent.

Use.—The same as Extract of Liquorice.

Dose.—Fl.dr.j.

Off. Prep.—*Mist. Sennæ Comp. Tinctura Chloroformi et Morphinæ.*

EXTRACTUM HÆMATOXYLI. Extract of Logwood. (The evaporated decoction.)

Comp.—Hæmatoxylin.

Prop.—Almost inodorous; taste sweet, austere; colour a deep reddish purple; soon hardens and becomes brittle.

Oper.—Astringent.

Use.—In diarrhœa; the protracted stage of dysentery; and internal hæmorrhages. It may be given in solution as a clyster.

Dose.—Gr.x. to gr.xxx. in pills, or dissolved in cinnamon water.

Incomp.—Alkalis and their carbonates; magnesia; carbonate of calcium; iron preparations.

EXTRACTUM HYOSCYAMI. Extract of Henbane. (The expressed juice inspissated with addition of green colouring matter first separated.)

Comp.—Hyoscyamine; an acid, probably malic; a narcotic empyreumatic oil; albumen, gum, fecula, salts.

Prop.—Odour slightly foetid; taste nauseous, bitterish, sub-saline.

Oper.—Narcotic, sedative.

Use.—In nervous and pulmonary affections, rheumatism, gout, chordee, obstinate ulcerations; and whenever it is required to allay pain, and avoid the constipation which opium is apt to induce.

Dose.—Gr.v. to gr.x. It has been increased to the extent of gr.xx. twice a day.

Incomp.—Caustic fixed alkalis.

Off. Prep.—*Pilula Colocynthis et Hyoscyami.*

EXTRACTUM JABORANDI. Extract of Jaborandi. (By maceration with proof spirit, percolation, and evaporation.)

Oper.—Sialogogue, diaphoretic, diuretic.

Use.—When free action of the skin is desired. In acute catarrh, asthma, bronchitis; also in renal dropsy, unless the cardiac power is failing.

Dose.—Gr.ij. to gr.x.

Off. Prep.—*Pilocarpinæ Nitras.*

EXTRACTUM JALAPÆ. Extract of Jalap. (A spirituous tincture distilled, and an aqueous decoction evaporated, and the two extracts mixed together and evaporated.)

Oper.—Cathartic, hydragogue.

Use.—In constipation, worms, dropsy, generally combined with soap or calomel.

Dose.—Gr.v. to gr.xv. in pills or powder.

EXTRACTUM KRAMĚŘĚ. Extract of *Krameria*. (Prepared in the same way as that of liquorice root.)

Comp.—Tannic acid, extractive.

Prop.—A powerful astringent.

Use.—In chronic diarrhœa and internal hæmorrhages.

Dose.—From gr.v. to gr.xx.

EXTRACTUM LACTŪCÆ. Extract of Lettuce. (Prepared in the same manner as the *Extractum Aconiti*.)

Prop.—Odour narcotic, like opium; taste bitter.

Oper.—Narcotic, diaphoretic.

Use.—In cases where opium is indicated but from some constitutional causes cannot be borne; in irritable gastric dyspepsia. Not so useful as *Lactucarium*.

Dose.—Gr.v. to gr.xv.

EXTRACTUM LŪPŪLI. Extract of Hops. (Prepared in the same manner as the *Extractum Jalapæ*.)

Prop.—Inodorous; taste bitter, with the peculiar flavour of the hop.

Oper.—Tonic, anodyne, diuretic.

Use.—In gout; dyspepsia; and mania, to procure rest; but its virtues are very doubtful.

Dose.—Gr.v. to gr.xv. in pills.

EXTRACTUM MEZĚREI ÆTHĚRĚUM. Ethereal Extract of Meze-reon. (*Mezevei Corticis* lb.j.; *Spiritus Rectificati* Ovij.; *Ætheris* Oj. Macerate the bark in 6 pints of spirit for 3 days, strain and press, and repeat the process with the residue of the spirit; mix and filter; recover the greater part of the spirit by evaporation, and afterwards deal in a similar manner with the ether.)

Oper.—Alterative, diuretic, vesicant.

Use.—In the preparation of the *Lin. Sinapis Comp.*

EXTRACTUM NUCIS VOMICÆ. Extract of *Nux Vomica*. (*Nucis Vomice* lb.j.; *Spiritus Rectific.* fl.unc.lxiv.; *Aque Destill.* fl.unc.xvj. Soften the *nux vomica* with steam, then dry rapidly and reduce to powder. Macerate with the spirit mixed with the water; strain, distil off the spirit, and evaporate by a water-bath to the consistence of a soft extract.)

Comp.—This extract should contain 15 per cent. of total alkaloid.

Oper.—Stimulant, tonic, affecting particularly the anterior columns of the spinal cord.

Use.—In paraplegia and other cases of partial paralysis; chorea, epilepsy, atonic diarrhœa, and nervous tremor; and also combined with aloes and tonics, as iron and quinine, in obstinate constipation.

Dose.—From gr.ss. to gr.ij.

EXTRACTUM OPII. Extract of Opium. (*Opii concisi* lb.j.; *Aque Destillatæ* Ovj. Add two pints of water to the opium, and macerate for twenty-four hours, then express the liquor. Macerate the residue, reduced to a pulp, in the remaining water for twenty-four hours, and express. Repeat the operation a third time. Lastly, evaporate the strained liquors to a proper consistence.)

Comp.—Bimeconate of morphine, codeine, narcotine, narceine, sulphate of calcium, gum, and very little resin.

Prop.—Inodorous; taste bitter; colour black; dissolved in water, it is not precipitated by alcohol.

Oper. Narcotic, anodyne, sedative, antispasmodic, with less subsequent derangement of the nervous system than crude opium occasions.

Use.—In all cases in which opium is useful; and better fitted for children, should it be deemed advisable to give any form of opium.

Dose.—Gr.ss. to gr.ij. in pills. This preparation is about 1-3rd stronger than opium; it is less stimulating than the tinctures and more soporific.

Off. Prep.—*Extractum Opii Liquidum. Trochisci Opii. Vinum Opii.*

Incomp.—Solutions of astringent vegetables, carbonate of potassium, bichloride of mercury, sulphate of copper, sulphate of zinc, acetates of lead, nitrate of silver, all of which precipitate this extract from its solution altered in its nature.

EXTRACTUM OPII LIQUIDUM. Liquid Extract of Opium. (*Extracti Opii* unc.j.; *Aquæ Destill.* fl.unc xvj.; *Spirit. Rectif.* fl.unc.iv.) The same strength as laudanum, containing 22 grs. of extract in the fluid ounce.

Oper.—The same as the preceding, but perhaps more sedative.

Use.—In all cases requiring the use of opium, but more especially in cases where the action of opium is not so well borne.

Dose.—Min.iv. to min.xl.

EXTRACTUM PAPĀVĒRIS. Extract of Poppies. (Prepared by maceration and percolation and the subsequent addition of rectified spirit.)

Comp.—Nearly the same as the Extract of Opium, with a smaller proportion of the alkaloids.

Oper.—Narcotic, anodyne, not producing delirium, headache, and nausea so generally as opium and its extract.

Use.—As this extract possesses nearly the same virtues as opium, only in a less degree, so it is employed in similar cases. It is to be preferred when the head is much affected.

Dose.—Gr.ij. to gr.v. in form of pill.

Incomp.—As under *Extractum Opii*.

EXTRACTUM PARĒIRÆ. Extract of Pareira. (Prepared by digestion, percolation, and evaporation.)

Oper.—Diuretic, tonic.

Use.—In affections of the urinary organs.

Dose.—Gr.x. to gr.xxx.

EXTRACTUM PARĒIRÆ LIQUIDUM. Liquid Extract of Pareira. (Prepared by maceration in water, percolation, evaporation, and subsequently by addition of rectified spirit.)

Prop.—Diuretic, tonic.

Use.—In affections of the urinary organs, especially catarrh of the bladder.

Dose.—From fl.dr.ss. to fl.dr.ij.

EXTRACTUM PHŶSOSTIGMĀTIS. Extract of Calabar Bean. (A spirituous extract obtained by maceration with rectified spirit, percolation, and evaporation.)

Oper.—Sedative, acting, perhaps, specially on the nervous centres which control the heart's motions.

Use.—In chorea and tetanus.

Dose.—Gr. $\frac{1}{16}$ to gr. $\frac{1}{4}$.

Off. Prep.—*Physostigmina*.

EXTRACTUM QUASSIÆ. Extract of Quassia. (Prepared by maceration, percolation, and evaporation.)

Comp.—Quassin, mucilage, but no tannin nor gallic acid.

Prop.—Tonic and stomachic.

Use.—In atonic dyspepsia and general debility.

Dose.—From gr. iij. to gr. v.

EXTRACTUM RHAMNĪ FRANGŪLÆ. Extract of Rhamnus Frangula. (By maceration with proof spirit, percolation, and evaporation.)

Oper.—Mild purgative and intestinal tonic.

Use.—In chronic constipation and hæmorrhoids.

Dose.—Gr. xv. to gr. lx.

EXTRACTUM RHAMNĪ FRANGŪLÆ LIQUĪDUM. Liquid Extract of Rhamnus Frangula. (One pound of the bark is exhausted by boiling with water; the decoction is concentrated to twelve ounces, and then made up to sixteen by addition of 4 fl.oz. of rectified spirit and distilled water if necessary.)

Oper.—Mild purgative.

Use.—In chronic constipation and hæmorrhoids. The action is analogous to that of Cascara Sagrada, no repeated augmentation of dose being necessary.

Dose.—Fl.dr.j. to fl.dr.iv.

EXTRACTUM RHĒL. Extract of Rhubarb. (*Rhei contriti* lb.j.; *Spiritus Rectific.*, *Aquæ Destillatæ*, āā q.s. Macerate for four days with a gentle heat, and allow the dregs to subside; evaporate by a water-bath to a proper consistence.)

Oper.—Purgative and stomachic; but as the extractive matter attracts oxygen in the humid state, and particularly when heated, much of the virtue of the medicine is destroyed, but not to the same extent as before, now that the heat of the water-bath is ordered.

Use.—In the same cases for which the powdered root is employed; but chiefly as a basis for pills to which more active matters are to be added.

Dose.—Gr. v. to gr. xv. in pills, or dissolved in peppermint water.

EXTRACTUM SARSÆ LIQUĪDUM. Liquid Extract of Sarsaparilla. (*Sarsæ* unc.xl.; *Aquæ Destill.* Ox.; *Spir. Tenuior.* Oij.; *Sacch.* unc.v. Macerate the sarsaparilla in the spirit for ten days, and press out the liquor. Digest the residue in the water; express, dissolve the sugar, evaporate the mixed liquors, and make up the volume to 40 fl.oz. with distilled water.)

Use.—In the same cases as the powder of the root.

Dose.—From fl.dr.ij. to fl.dr.iv. twice or thrice a day.

EXTRACTUM STRAMŌNĪ. Extract of Stramonium. (*Stramonii Seminorum* lb.j.; *Ætheris* Oj. vel q.s.; *Aquæ Destillatæ et Spir. Tenuior.* āā q.s. Shake the ether in a bottle with half a pint of the water, and after separation decant the ether; pack the stramonium in a percolator, and remove the oil by means of the washed ether; reject-

ing the ethereal solution, pass the spirit over the residue; and afterwards distil and evaporate.)

Prop.—Odour rank; taste bitter.

Oper.—Similar to that of belladonna, sedative, narcotic, antispasmodic.

Use.—In asthma and other spasmodic affections.

Dose.—From gr. $\frac{1}{4}$ to gr. $\frac{1}{2}$ in the form of pill, twice or thrice a day.

EXTRACTUM TARAXĂCI. Extract of Dandelion. (The juice of the plant evaporated.)

Prop.—Inodorous; taste bitter, mucilaginous.

Oper.—Laxative, diuretic, cholagogue.

Use.—In jaundice, chronic inflammation, and incipient cancer of the liver, chronic derangements of the stomach, hypochondriasis, and dropsy.

Dose.—Gr. v. to gr. xxx.

EXTRACTUM TARAXĂCI LIQUIDUM. Liquid Extract of Dandelion. (By macerating dry dandelion root in proof spirit, expressing, and again macerating with addition of water, and subsequent evaporation of the mixed liquors.)

Oper.—Diuretic, tonic, cholagogue.

Use.—Not much employed except as a vehicle. Formerly it had considerable reputation in the treatment of gout.

Dose.—Fl.dr. $\frac{1}{4}$ to fl.dr. ij.

FARĪNA TRITĪCI. Wheaten Flour, (*Triticum sativum*. N.O. *Graminaceæ*.)

Use.—In the preparation of the Cataplasma Fermenti.

FEL BOVINUM PURIFICĀTUM. Purified Ox Bile. (*Bos Taurus*. Class, *Mammalia*.) Ox Gall purified by rectified spirit.

Comp.—Some biliary substances, as *Glycocholic Acid* ($C_{26}H_{45}NO_6$) and *Taurocholic Acid* ($C_{26}H_{45}NSO_7$) in combination with sodium and colouring matter and fatty matters (*Cholesterin*).

Prop.—Co our yellowish-green; taste bitter-sweet; soluble in water and spirit. If sulphuric acid is added to a solution of bile mixed with syrup, a change of colour from cherry-red to violet is developed. Rectified spirit does not throw down any precipitate from the watery solution.

Oper.—Laxative and stomachic.

Use.—In various forms of dyspepsia attended with constipation.

Dose.—Gr. v. to gr. x.

FERRI ARSĒNIAS. Arseniate of Iron. (*Ferri Sulphatis* unc. xx $\frac{3}{4}$; *Sodii Arseniatis* 300° F. (148° 9 C.) *desiccate* unc. xv $\frac{3}{4}$; *Aquæ Destillatæ ferventis* q.s.; *Sodii Bicarbonatis* unc. ivss. Dissolve the arseniate of sodium in about 5 pints, and the sulphate of iron in about 6 pints of the water, mix the two solutions, adding the bicarbonate of sodium, dissolved in a little distilled water. Stir thoroughly. Collect and wash and dry the precipitate on porous bricks in a warm air chamber, the temperature of which shall not exceed 100° F. (37° 8 C.)

Comp.—Arseniate of iron ($Fe_3As_2O_8$) with some oxide.

Prop.—Tasteless, amorphous; green; insoluble in water, but soluble in hydrochloric acid. Ferricyanide of potassium (red prussiate of potash) throws down a deep blue, the ferrocyanide (yellow prussiate) a lighter blue precipitate. A small quantity boiled with an excess of caustic soda and filtered, neutralised by nitric acid, gives a brick-red precipitate with nitrate of silver (arseniate of silver). The

solution in hydrochloric acid, when diluted, gives no precipitate with chloride of barium; 100 grains dissolved in an excess of sulphuric acid diluted with water continue to give a blue precipitate with the yellow prussiate, until at least 225 grain-measures of the volumetric solution of the bichromate of potassium have been added.

Oper.—Tonic and alterative.

Use.—In cutaneous diseases and anæmia.

Dose.—Gr. $\frac{1}{16}$ to gr. $\frac{1}{2}$.

FERRI CARBONAS SACCHARATA. Saccharated Carbonate of Iron. (*Ferri Sulph.* unc.ij.; *Ammonii Carbonatis* unc. $\frac{1}{4}$; *Sacchari purificati* unc.j.; *Aque Destillatæ ferventis* cong.ij. Dissolve the sulphate and carbonate separately in half a gallon of water. Mix the liquors, and let the carbonate of iron subside. Pour off the supernatant liquor, and frequently wash the precipitated carbonate, and add to it the sugar; then, at a temperature not exceeding 212° F (100° C.), evaporate to a powder, which must be kept in a well-closed bottle.)

Comp.—Carbonate of iron ($\text{FeCO}_3 \cdot x\text{H}_2\text{O}$), with peroxide of iron and sugar. The carbonate (if reckoned as anhydrous) forms about 33 per cent. of the mixture.

Prop.—Greyish-brown colour, inodorous, sweetish chalybeate taste. Soluble with effervescence in diluted warm hydrochloric acid; the solution gives a copious blue precipitate with ferricyanide of potassium, but little with chloride of barium.

Oper.—Tonic, emmenagogue, but not astringent.

Use.—As the other salts of iron; but especially adapted for children and delicate women.

Dose.—Gr.v. to gr.xxx.

Off. Prep.—*Pilula Ferri Carbonatis.*

FERRICYANIDE OF POTASSIUM. (Appendix, B.P.) *Syn.* Red Prussiate of Potash.

Comp.— $\text{K}_3\text{Fe}_2\text{C}_{12}\text{N}_{12}$.

Use.—In preparation of the test solution which is employed as a means of recognising ferrous or ferric salts.

FERRI ET AMMŌNĪI CITRAS. Citrate of Iron and Ammonium. *Syn.* Ferri et Ammonia Citras. (*Liq. Ferri Persulphatis* fl.unc.x. vel q.s.; *Liquor. Ammonia* fl.unc.xxij. vel q.s.; *Acidī Citrici* unc.iv.; *Aque Destillatæ* q.s. The ammonia precipitates the hydrated peroxide; to this the citric acid in solution is added, neutralised by ammonia, and the precipitate evaporated on glass or porcelain plates.)

Prop.—In thin transparent scales of a deep red colour, slightly sweetish and astringent to the taste. It feebly reddens litmus paper, is almost insoluble in rectified spirit, but soluble in water. Evolves ammonia, and deposits ferric hydrate on being heated with solution of potash. When incinerated with exposure to air, it leaves not less than 30 per cent. of peroxide of iron.

Oper.—Tonic, hæmatic, emmenagogue, but not astringent.

Use.—In uterine complaints, cardiac diseases, anæmia of children and adults, especially that resulting from chronic kidney disease.

Dose.—Gr.v. to gr.x.

Off. Prep.—*Vinum Ferri Citratis.*

FERRI ET QUINĪNÆ CĪTRAS. Citrate of Iron and Quinine. (*Liq. Ferri Persulph.* fl.unc.ivss.; *Quinine Sulphatis* unc.j.; *Acidī Sulphurici Diluti* fl.dr.xij.; *Acidī Citrici* unc.ij.; *Liq. Ammonia et Aque Destillatæ*, āā q.s. Dissolve the citric acid in 5 fluid ounces of

water, and having applied the heat of the water-bath, add the oxide of iron precipitated from the solution of the persulphate by the ammonia, and afterwards the quinine, also precipitated by the ammonia. Filter, evaporate, and dry on porcelain plates at the temperature of 100° F. (37°·8 C.)

Comp.—Citrate of the protoxide and peroxide of iron with citrate of quinine.

Prop.—Thin greenish golden-yellow scales; deliquescent; soluble in cold water; ammonia throws down a white, soda a reddish-brown, ferrocyanide of potassium and the ferricyanide a blue, and tannic acid a greyish-black precipitate; taste bitter; 50 gr. in an ounce of water will yield 7½ gr. of quinine on the addition of ammonia.

Oper.—Tonic, hæmatic, emmenagogue, having the combined properties of iron and quinine.

Use.—In anæmia and debility.

Dose.—Gr.v. to gr.x.

FERRI PERCHLORIDI LIQUOR. See *Liquor Ferri Perchloridi*.

FERRI PERNITRATIS LIQUOR. See *Liquor Ferri Pernitratidis*.

FERRI PEROXIDUM HYDRATUM. Peroxide of Iron. *Syn.* Ferri Sesquioxidum; Ferri Oxidum Rubrum. (*Liq. Ferri Persulphatis* fl.unc.iv.; *Liq. Sodæ* fl.unc.xxxij.; *Aquæ Destill.* q.s. The solution of persulphate of iron is mixed with a pint of water, and precipitated by the addition of the solution of soda. The precipitated ferric hydrate is washed, dried, and reduced to a fine powder.)

Comp.— $\text{Fe}_2\text{O}_3 \cdot \text{H}_2\text{O}$ or $\text{Fe}_2\text{O}_3(\text{HO})_2$.

Prop.—Reddish-brown; inodorous; tasteless; insoluble in water, but soluble, by the aid of heat, in diluted hydrochloric acid, and the solution gives a copious precipitate with ferrocyanide but not with ferricyanide of potassium. Heated to dull redness in a test-tube, it gives off ten per cent. of water.

Oper.—Tonic, antidote to arsenic.

Use.—In debility; in poisoning by arsenic.

Dose.—Gr.v. to gr.xxx. Employed in cases of poisoning by arsenious acid, a tablespoonful may be mixed with water, and given every five or ten minutes.

Off. Prep.—*Emplastrum Ferri*.

FERRI PHOSPHAS. Phosphate of Iron. (*Ferri Sulphatis* unc.ij.; *Sodii Phosphatis* unc.ij.¾; *Sodii Bicarbonatis* unc.¾; *Aquæ Destill. ferventis* q.s. The precipitate resulting from the mixture of the above, carefully washed and dried at a temperature not exceeding 120° F. (48°·9 C.))

Comp.—Ferrous phosphate, $\text{Fe}_3(\text{PO}_4)_2 \cdot 8\text{H}_2\text{O}$, at least 47 per cent.; with ferric phosphate and some oxide.

Prop.—Slate-blue amorphous powder, insoluble in water, but soluble in hydrochloric acid. The ferrocyanide and ferricyanide of potassium both throw down precipitates. The addition of tartaric acid and excess of ammonia, and subsequently of the solution of ammonio-sulphate of magnesium, produces a crystalline precipitate. When the salt is digested in hydrochloric acid with a lamina of pure copper, a dark deposit does not form on the metal. Thirty grains dissolved in hydrochloric acid continue to give a blue precipitate with ferricyanide of potassium, until 279 grain-measures of the volumetric solution of bichromate of potassium have been added.

Oper.—Hæmatic, tonic.

Use.—In anæmia, diabetes (*Prout*), rickets.

Dose.—Gr.v. to gr.x.

Off. Prep.—*Syrupus Ferri Phosphatis*.

FERRI SULPHAS. Sulphate of Iron. (A sulphate prepared by acting on iron wire with dilute sulphuric acid.)

Comp.— $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$.

Prop.—Inodorous; taste strong styptic; crystals light green, transparent oblique rhomboidal prisms; soluble in two parts of water, insoluble in rectified spirit; effloresce in the air, and turn yellow. The aqueous solution is clear, gives a white precipitate with chloride of barium; a blue one with ferricyanide, and a nearly white or light blue one with ferrocyanide of potassium. It gives no precipitate with sulphuretted hydrogen.

Oper.—Tonic, hæmatic, emmenagogue, anthelmintic; in large doses emetic.

Us.—In diseases of general debility, anæmia, amenorrhœa with a weak languid pulse; diabetes; in clysters for ascarides.

Dose.—Gr.j. to gr.v. combined with myrrh, ammoniacum, and bitter extracts.

Incomp.—The earths, chloride of calcium, chloride of barium, alkalis and their carbonates, borax, nitrate of silver, acetate of lead, soaps, tannin.

Off. Prep.—*Ferri Arsenias*. *Ferri Carbonas Saccharata*. *Ferri Phosphas*. *Ferri Sulphas Exsiccata*. *Mistura Ferri Composita*. *Pil. Aloes et Ferri*.

FERRI SULPHAS EXSICCĀTA. Dried Sulphate of Iron.

Comp.— $\text{FeSO}_4 \cdot \text{H}_2\text{O}$.

Use.—The same as the sulphate; intended for administration in the form of pills.

Dose.—Gr.ss. to gr.ijj.

FERRI SULPHAS GRANULĀTA. Granulated Sulphate of Iron. (This salt is prepared by pouring the hot solution of sulphate of iron into rectified spirit, and stirring the mixture so that the salt shall separate in minute granular crystals.)

Comp.— $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$.

Prop.—Granular pale greenish-blue crystals, soluble in water, but insoluble in rectified spirit; taste styptic; sulphuretted hydrogen throws down no precipitate from the aqueous solution. Generally corresponds with the characters and tests for sulphate of iron.

Oper.—Hæmatic, tonic, emmenagogue, astringent.

Use.—In all cases requiring iron.

Dose.—Gr.j. to gr.v.

FERRUM. Iron. Annealed iron wire, or wrought-iron nails, free from oxide.

Prop.—Colour bluish-grey; texture fibrous; fracture brilliant and fine-grained; sp. gr. 7·6 to 7·8; hard, ductile, malleable, magnetic. Chemical symbol, Fe. Equivalent, 56.

Oper.—Tonic, anthelmintic; producing fœtid eructations, owing to its meeting with acid in the stomach, which oxidises it, sulphuretted hydrogen gas being evolved.

Use.—In general debility, dyspepsia, hysteria, chlorosis, worms, and in passive hæmorrhages; it can prove useful only when it is oxidised, which is known by the eructations and black fæces.

Dose.—Of the filings gr.ij. to gr.xx., with some aromatic powder; or in the form of electuary with honey; or pills with extract of gentian.

Off. Prep.—*Ferri Sulphas. Ferri Sulphas Granulata. Ferrum Redactum. Liquor Ferri Perchloridi Fortior. Liquor Ferri Pernitratiss. Mistura Ferri Aromatica. Pil. Ferri Iodidi. Syrupus Ferri Iodidi. Vinum Ferri.*

FERRUM REDACTUM. Reduced Iron. Metallic iron with a variable amount of oxide of iron. (Prepared by reducing the peroxide by passing over it a stream of hydrogen in a heated gun-barrel.)

Oper. & Use.—The same as iron and its filings.

Dose.—Gr.j. to gr.v.

Off. Prep.—*Trochisci Ferri Redacti.*

FERRUM TARTARATUM. Tartarated Iron. *Syn. Ferri Potassio-tartras; Ferrum Tartarizatum. (Liq. Ferri Persulphatis fl.unc.vj.; Liqueoris Ammoniac fl.unc.xj.; Potassii Tartratis Acidæ contritæ unc.ij.; Aquæ Destill. q.s.* The hydrated peroxide precipitate is mixed with the acid tartrate in solution, and the solution is evaporated at a temperature not exceeding 140° F. (60° C.) and dried on porcelain slabs.)

Prop.—In garnet scales, inodorous, soluble in water, neutral, taste styptic. The aqueous solution, acidulated with hydrochloric acid, gives a copious blue precipitate with ferrocyanide of potassium; gives no precipitate with alkalis. By incinerating 50 grs. at a red heat, washing with distilled water, and again incinerating, a residue of peroxide of iron is obtained, weighing about 15 grs.

Oper.—Tonic, deobstruent.

Use.—This is one of the mildest of the salts of iron, and so palatable that children may be easily persuaded to take it. In scrofulous tumours, weakened bowels, &c.

Dose.—Gr.v. to gr.x. in powder, or bolus, mixed with any aromatic or with calumba.

Incomp.—Sulphurated potash, infusions of oak bark, galls, or other astringent vegetables.

FICUS. The Fig. The dried fruit. (*Ficus Carica. N.O. Moraceæ. Smyrna. b*)

Prop.—Taste sweet and mucilaginous.

Oper.—Nutritive, emollient, laxative, suppurative.

Use.—In pulmonary and other inflammatory diseases, in decoctions; in cynanche tonsillaris, during suppuration, as a gargle (*R. Ficos. unc.ij.; Aquæ unc.vj.; coque et cola*); in gumboils, roasted, then split, and applied to the part.

Off. Prep.—*Conf. Sennæ.*

FILIX MAS. Male Fern. The dried rhizome, with the bases of the footstalks and portions of the root fibres. (*Aspidium Filix Mas. N.O. Filices.* Indigenous. Collected late in autumn, divested of scales, roots, and all dead portions, and dried. *℥*)

Prop.—Odour weak, but disagreeable; taste sweet, mucilaginous; slightly bitter and austere.

Oper.—Anthelmintic.

Use.—In tænia. Employed only in form of the official preparation.

Off. Prep.—*Ext. Filicis Liquidum.*

FÆNICULI FRUCTUS. Fennel Fruit. (*Fœniculum capillaceum (F. vulgare). N.O. Umbelliferæ.*)

Prop.—About 3 lines long and 1 broad, elliptical, slightly curved,

beaked, having 8 pale brown longitudinal ribs, the two lateral being double; odour aromatic; taste warm, sweetish.

Oper.—Carminative, diuretic.

Use.—In flatulence.

Dose.—Gr.xx. to gr.lx. bruised.

Off. Prep.—*Aqua Fœniculi*. *Pulvis Glycyrrhizæ Comp.*

FOUSEL OIL. See *Alcohol Amylicum*.

GALBĀNUM. Galbanum; a gum-resin. (*Ferula galbaniflua*, *Ferula rubricaulis*, and probably other species. N.O. *Umbelliferae*. India and Levant. l)

Comp.—Resin, gummy extractive, volatile oil, and *umbelliferon*, which occurs in colourless silky crystals.

Prop.—Odour aromatic, not disagreeable; taste bitter, acrid; the agglutinated tears of a greenish-yellow colour; forms an emulsion when triturated with water; soluble in proof spirit, wine, and vinegar.

Oper.—Internally antispasmodic, deobstruent, expectorant; externally resolvent, discutient.

Use.—In hysteria, particularly that which attends irregular and deficient menstruation; chlorosis; externally to indolent tumours.

Dose.—Gr.v. to gr.lx. in pills or emulsion.

Off. Prep.—*Emplast. Galbani*. *Pilule Asafœtidæ Comp.*

GALLA. Galls. (Excrescences on *Quercus lusitanica*, var. *infectoria*. Asia Minor. l) Excrescences caused by punctures and deposited eggs of *Cynips Gallæ tinctoriæ*.

Comp.—Tannic acid 15 to 65 per cent., gallic acid about 5 per cent., and other less important compounds. The tannic acid has the formula $C_{27}H_{22}O_{17}$.

Prop.—Inodorous; taste very austere and astringent; hard, ligneous, $\frac{1}{2}$ inch to $\frac{3}{4}$ inch or more in diameter, covered with tubercles; the colour of the best is blackish-grey or blue; the unpierced are the best.

Oper.—Powerfully astringent, tonic.

Use.—They have been used in diarrhoea, passive hæmorrhages, and intermittents; but they are principally employed in gargles and injections, and the powder to form an ointment for piles, in the proportion of gr.cxx. to lard unc.ij. and powdered opium gr.lx. The tincture is used as a test for the salts of iron.

Dose.—When exhibited internally, gr.x. to gr.xx. twice or thrice a day.

Incomp.—Solution of lime, carbonate of potassium, acetate and subacetate of lead, sulphate of copper, nitrate of silver, sulphate of iron, tartarated antimony, nitrate of mercury, perchloride of mercury, infusion of cinchona, solution of isinglass, solution of opium; all of which precipitate the infusion of galls.

Off. Prep.—*Acidum Gallicum*. *Acidum Tannicum*. *Tinctura Gallæ*.
Ung. Gallæ c. Opio. *Ung. Gallæ*.

GELSEMIUM. Yellow Jasmine. Dried rhizome and rootlets. (*Gelsemium nitidum* (*G. sempervirens*). N.O. *Loganiaceæ*.)

Comp.—A colourless amorphous alkaloid, *Gelsemine*, with gelsemic acid, volatile oil, and other ingredients.

Prop.—Cylindrical pieces, $\frac{1}{2}$ inch to 6 inches long, with small rootlets; yellowish-brown externally and marked longitudinally by dark purplish lines; odour narcotic, aromatic; taste bitter.

Oper.—Sedative, anti-neuralgic.

Use.—To relieve the pain of migraine and neuralgia. Also occasionally in various forms of cough. Its chief action is in neuralgia of the branches of the 5th nerve.

Dose.—Gr.v. to gr. xxx.

Off. Prep.—*Extractum Gelsemii Alcoholicum. Tinctura Gelsemii.*

GENTIĀNÆ RADIX. Gentian Root. (*Gentiana lutea*. N.O. *Gentianaceæ*. Mountains of Europe. $\frac{1}{2}$)

Prop.—Odour heavy, peculiar; taste at first sweetish, then extremely bitter, but not astringent; from $\frac{1}{2}$ inch to 1 inch in thickness and several inches in length; externally brownish-yellow, wrinkled; internally yellow, spongy; flexible; virtues yielded to ether, alcohol, and water.

Comp.—Gentianite, an uncrystallisable, bitter principle; gentianin ($C_{14}H_5O_5$), crystallisable but not bitter; sugar, pectin, extractive, gum.

Oper.—Tonic, stomachic, in large doses aperient; antiseptic.

Use.—In dyspepsia; hysteria; jaundice; gout, united with aromatics; chlorosis, and dropsy, with squill and neutral salts; in dysentery, with ipecacuanha. Externally in putrid ulcers.

Dose.—Gr.x. to gr. xxx.

Off. Prep.—*Extractum Gentianæ. Infusum Gent. Comp. Tinct. Gent. Comp.*

GLYCERĪNUM. Glycerine. (A sweet principle obtained from fat and fixed oils, and containing a small percentage of water.)

Comp.— $C_3H_5(OH)_3$.

Prop.—A clear, colourless fluid, oily to the touch, sweet, inodorous; it dissolves arsenious acid, wax, lime, oxide of lead, tannic and gallic acids, many vegetable alkaloids and acids; soluble in water and alcohol; when decomposed by heat it evolves intensely irritating vapours. Sp. gr. 1.25.

Oper.—Emollient, slightly nutrient.

Use.—Internally used instead of cod-liver oil (in doses of min.xx. to fl.dr.ij.) Externally in eruptions of scalp, lepra, psoriasis, lichen, inveterate impetigo, prurigo; diluted with water it is frequently applied to chapped hands, and also in deafness from rigidity of membrana tympani. It may be added to lotions, cataplasms, or ointments, in the proportion of $\frac{1}{8}$ th or $\frac{1}{16}$ th.

Dose.—Fl.dr.j. to fl.dr.ij.

Off. Prep.—*Extract. Cinchonæ Liq. Glyc. Acidi Carbol. Glyc. Acidi Gallici. Glyc. Acidi Tannici. Glyc. Aluminis. Glyc. Amyli. Glyc. Boracis. Glyc. Plumbi Subacet. Glyc. Tragacanthæ. All Lamellæ. Lin. Iodi. Lin. Potassii Iodidi c. Sap. Mel Boracis. Pil. Aloes et Myrrhæ. Pil. Rhei Comp. Pil. Saponis Comp. Tinct. Kino. Ung. Iodi.*

GLYCERĪNUM ACĪDI CARBŎLICI. Glycerine of Carbolic Acid. (*Acidi Carbolici* unc.j.; *Glycerini* fl.unc. iv. Rub them together in a mortar until the acid is dissolved.)

Oper. & Use.—Action like creasote, the most convenient mode of administering the acid: vide *Acidum Carbolicum*.

GLYCERĪNUM ACĪDI GALLICI. Glycerine of Gallic Acid. (*Acidi Gallici* unc.j.; *Glycerini* fl.unc. iv. Rub them together in a mortar,

and then transferring the mixture to a porcelain dish, apply a gentle heat until complete solution is effected.)

Oper.—Astringent, styptic. A convenient form for the administration of gallic acid.

Use.—Vide *Acidum Gallicum*.

Dose.—Min.x. to min.xxx. or fl.dr.j.

GLYCERINUM ACIDI TANNICI. Glycerine of Tannic Acid. (*Acidi Tannici* unc.j.; *Glycerini* fl.unc.iv. Mix as in the preceding preparation.)

Oper.—Astringent, styptic. An agreeable mode of administering tannic acid.

Use.—Vide *Acidum Tannicum*.

Dose.—Min.x. to min.xxx.; for a gargle in the proportion of $\frac{1}{12}$ th.

GLYCERINUM ALUMINIS. Glycerine of Alum. (*Aluminis* unc.j.; *Glycerini* fl.unc.v. Stirred together, with heat, and separated from any deposited matter.)

Oper. & Use.—Astringent for topical application. Employed externally or as a gargle.

GLYCERINUM AMYLI. Glycerine of Starch. (*Amyli* unc.j.; *Glycerini* fl.unc.v.; *Aquæ Destill.* fl.unc.ij. Rub together in a porcelain dish, apply heat, and stir constantly until a translucent jelly is formed.)

Oper. & Use.—Emollient and protective—for external use.

GLYCERINUM BORACIS. Glycerine of Borax. (*Boracis contritæ* unc.j.; *Glycerini* fl.unc.iv.; *Aquæ Destill.* fl.unc.ij. Rub them together in a mortar until the borax is dissolved.)

Oper.—Detergent.

Use.—Locally as a gargle—in the proportion of $\frac{1}{4}$ th.

GLYCERINUM PLUMBI SUBACETATIS. Glycerine of Subacetate of Lead. (*Plumbi Acet.* unc.v.; *Plumbi Oxidi* unc.ijss.; *Glycerini* Oj.; *Aquæ Destillatæ* fl.unc.xij. Mix together, boil, filter, and evaporate the water.)

Oper. & Use.—Local sedative and astringent—especially employed in cases of chronic eczema.

Off. Prep.—*Ung. Glycerini Plumbi Subacetatis*.

GLYCERINUM TRAGACANTHÆ. Glycerine of Tragacanth. (*Tragacanthæ* gr.cx.; *Glycerini* fl.unc.j.; *Aquæ Destillatæ* fl.gr.lxxiv. Mix and rub in a mortar until a translucent homogeneous jelly is produced.)

Use.—An excipient for pills.

GLYCYRRHIZÆ RADIX. Liquorice Root. The root and underground stem fresh and dried. (*Glycyrrhiza glabra*. N.O. *Leguminosæ*. Indigenous. $\mathfrak{L}$)

Prop.—Inodorous; taste sweet, mucilaginous, leaving, when unpeeled, a degree of bitterness in the mouth; flexible; cuticle brown.

Oper.—Demulcent.

Use.—In catarrh; but it is generally combined with other mucilages, and is a pleasant and useful demulcent.

Dose.—Of the powder gr.xxx. to gr.lx.

Off. Prep.—*Decoct. Sarsæ Comp. Infusum Lini. Ext. Glycyrrhizæ. Ext. Glycyrrhizæ Liq. Confectio Terebinthinæ. Pil. Hydrargyri. Pil. Ferri Iodidi. Pulv. Glycyrrhizæ Comp.*

GOSSYPIUM. Cotton Wool. The downy investiture of the seeds of Raw Cotton. (*Gossypium barbadense* and other species. N.O. *Mulvaceæ.* America, India.)

Use.—In burns and scalds, and for the preparation of pyroxylin (gun-cotton).

GRANĀTI RADĪCIS CORTEX. Pomegranate Root Bark. Dried bark of the roots. (*Punica Granatum.* N.O. *Myrtaceæ.* South of Europe. $\mathcal{L}$)

Prop.—In quills or fragments of a greyish-yellow colour externally, yellow internally, having short fracture. Inodorous; taste bitter, styptic; strikes a permanent blue with sulphate of iron: virtues yielded to water.

Oper.—Astringent.

Us.—In tænia, chronic and colliquative diarrhœa, and the protracted stage of dysentery; but chiefly externally, as an injection in leucorrhœa, and gargle in angina.

Dose.—In substance gr.xxx. to gr.lx.; of a decoction fl.unc.ij. to fl.unc.iv. every three hours.

Incomp.—Sulphate of iron, perchloride of iron, nitrate of silver, acetates of lead.

Off. Prep.—*Dec. Granati Radicis.*

GUAIĀCI LIGNUM. GUAIĀCI RESĪNA. The wood in the form of chips, raspings, or shavings; and the resin obtained from the stem by natural exudation, by incisions, or by heat. (*Guaiacum officinale* or *Guaiacum sanctum.* N.O. *Zygophyllaceæ.* West Indian Islands. $\mathcal{L}$)

Prop.—Odour slightly fragrant; taste warm and bitter, the resin more so than the wood. The resin is concrete, brittle; colour externally greenish, internally greyish; fresh fracture reddish; water dissolves about $\frac{1}{10}$ th, alcohol 95 parts in 100; soluble also in solution of potash 15 parts, in solution of ammonia 31 parts. The powder is greyish, but changes to green in the air.

Oper.—Stimulant, diaphoretic; in large doses purgative.

Use.—In chronic rheumatism, gout, cutaneous diseases, and the sequelæ of syphilis.

Dose.—To produce its first effects gr.v. to gr.xx. of the resin in pills, or in emulsion made with mucilage or yolk of egg; to purge, gr.xv. to gr.xxx. in the same form.

Incomp.—The mineral acids.

Off. Prep.—Of the wood:—*Decoct. Sarsæ Comp.* Of the resin:—*Mist. Guaiaci. Tinct. Guaiaci Ammoniata. Pilula Hydrargyri Subchloridi Composita.*

GUTTA PERCHA. The concrete juice of the *Dichopsis* or *Isonandra Gutta*, and of several other trees of the N.O. *Sapotaceæ.*

Prop.—In tough, flexible pieces, of a light-brown or choco'ate colour; soluble, or nearly soluble, in chloroform, yielding a more or less turbid solution; entirely soluble in oil of turpentine, carbon disulphide, or benzol.

Use & Off. Prep.—To make Liquor Gutta Percha.

HÆMATOXYLI LIGNUM. Logwood. The sliced heart-wood. (*Hæmatoxylon campechianum*. N.O. *Leguminosæ*. Campeachy, Honduras, and Jamaica. h)

Prop.—Almost inodorous; taste sweetish, sub-astringent; colour deep red; firm, heavy. Its virtues extracted both by water and alcohol. A small portion chewed imparts to the saliva a dark pink colour.

Comp.—Hæmatoxylin ($\text{C}_{10}\text{H}_{14}\text{O}_6$). Tannin, resin.

Oper.—Astringent, tonic.

Use.—In the protracted stage of diarrhoea and dysentery, under the form of decoction.

Incomp.—The mineral acids, acetic acid, solutions of alum. sulphates of iron and copper, acetate of lead, opium, decoction of cinchona, tartar emetic.

Off. Prep.—Decoctum *Hæmatoxyli*. Ext. *Hæmatoxyli*.

HEMIDESMI RADIX. Hemidesmus Root dried. Indian Sarsaparilla. (*Hemidesmus indicus*. N.O. *Asclepiadaceæ*. India.)

Prop.—Yellowish-brown, cylindrical, tortuous, furrowed, and with annular cracks. Agreeable odour, sweet taste, imparting both to boiling water; it is believed to contain a volatile crystallisable substance (*hemidesmic acid*).

Oper.—Demulcent, diaphoretic, tonic.

Use.—As a substitute for sarsaparilla, and for imparting an agreeable flavour to medicines, especially to the salts of iron.

Off. Prep.—*Syrupus Hemidesmi*.

HIRŪDO. The Leech. 1. *Sanguisuga medicinalis*, the Speckled Leech; 2. *S. officinalis*, the Green Leech. (Class, *Annelida*. Spain, France, Italy, and Hungary.)

Prop.—Body oblong, 2 or 3 inches long, tapering to each end, plano-convex, wrinkled transversely; colour on the back olive green, with six rusty-red longitudinal stripes; the two central yellow, broken with black; two lateral yellow, entire; two intermediate black, and yellow chain; belly (1) greenish-yellow, spotted with black, (2) olive-green, not spotted; mouth and bite triangular; and extremity a circular sucker.

Use.—In every species of local inflammation, except the erysipelatous; particularly in ophthalmia, placed as near the eye as possible. The best mode of making them bite is to clean the part well with soap and water, then to dry it, and, before applying the leech, to allow it to dry itself by crawling on a clean cloth; or the part may be scratched with the point of the lancet. Leeches will not bite when casting their skins, which they often change; nor in rooms in which there is any strong or offensive odour. It is not advisable to use them in icterus, chlorosis, or other blood diseases, in consequence of the difficulty of arresting the hæmorrhage.

HORDEUM DECORTICĀTUM. Pearl Barley. (*Hordeum distichon*. N.O. *Gramineæ*. Indigenous. ☉)

Prop.—Taste sweetish, viscid; prepared granules roundish, of a pearly whiteness; consists almost entirely of starch.

Use.—See *Decoctum*. As it is apt to get musty, barley should always be washed before it is made into decoction.

Off. Prep.—*Decoctum Hordei*.

HYDRARGYRI IODĪDUM RUBRUM. Red Iodide of Mercury. *Syn.* Hydrargyri Binioididum; Mercuric Iodide. (*Hydrargyri Perchloridi*

unc.iv.; *Potassii Iodidi* unc.v.; *Aquæ Destillatæ ferventis* Oij. Dissolve the perchloride in Oij., and the iodide in the remainder of the water, and mix the solutions when cold. Wash and finally dry the precipitate at a temperature not exceeding 212° F. (100° C.)

Prop.—A brilliant red powder, obtained in rhomboidal crystals by sublimation, becoming yellow when gently heated over a lamp on a sheet of paper; almost insoluble in water, sparingly in alcohol, freely in ether or in an aqueous solution of iodide of potassium. Digested with soda it becomes reddish-brown, and the fluid cleared by filtration and mixed with solution of starch gives a blue colour with nitric acid; volatilised by a heat under redness; inodorous; strong metallic taste.

Comp.— HgI_2 .

Use.—In strumous affections, lepra, and infantile syphilis; as an external application.

Dose.—Gr. $\frac{1}{32}$ to gr. $\frac{1}{8}$.

Off. Prep.—*Liq. Arsenii et Hydrargyri Iodidi. Ung. Hydrargyri Iodidi Rubri.*

HYDRARGYRI NITRĀTIS LIQUOR ACĪDUS. See *Liq. Hydrargyri Nitratis Acidus*.

HYDRARGYRI OXĪDUM FLĀVUM. Yellow Oxide of Mercury. (*Hydrargyri Perchloridi* unc.iv.; *Liquoris Sodæ* Oij.; *Aquæ Destillatæ* q.s. Dissolve the perch'oride in 4 pints of the water by the aid of heat, and add the solution of soda; wash the precipitated oxide on a calico filter; and dry it by the heat of a water bath.)

Prop.—A yellow powder, soluble in hydrochloric acid, yielding a solution which gives a white precipitate with solution of ammonia. It is entirely volatilised when heated to incipient redness, being resolved into oxygen gas and the vapour of mercury.

Comp.— HgO .

Use.—For external application in the form of oleate.

Off. Prep.—*Oleatum Hydrargyri.*

HYDRARGYRI OXĪDUM RUBRUM. Red Oxide of Mercury. *Syn.* Hydrargyri Nitrico-Oxidum. (*Hydrargyri, pondere, unc.viii.*; *Acidi Nitrici fl.unc.ivss.*; *Aquæ fl.unc.ij.* Dissolve half the mercury in the diluted nitric acid and evaporate to dryness; triturate the dry salt with the remainder of the mercury, heat the mixture in a porcelain dish, with repeated stirrings, until no acid vapours are evolved.)

Comp.— HgO . When well prepared it consists of bright red crystalline scales, sublimed at a high temperature, emitting no nitrous vapour.

Prop.—An orange-red powder, soluble in hydrochloric acid, which solution with caustic potash in excess gives a yellow, and with solution of ammonia a white precipitate.

Oper.—Stimulant, escharotic.

Use.—In the proportion of gr.ss. to sugar gr.iv. it is blown into the eye to remove specks on the cornea; applied to chancres and foul ulcers to cleanse and stimulate them, either sprinkled on the part in fine powder, or united with lard as an ointment.

Off. Prep.—*Ung. Hydrargyri Oxidi Rubri.*

HYDRARGYRI PERCHLORĪDUM. Perchloride of Mercury. *Syn.* Hydrargyrum Corrosivum Sublimatum; Hydrargyri Bichloridum;

Corrosive Sublimate ; Mercuric Chloride. (*Hydrargyri Persulphatis* unc.xx.; *Sodii Chloridi exsiccati* unc. xvj.; *Manganesii Oxidi Nigri in subtilissimum pulverem reducti* unc.j.) Place the materials well and intimately mixed in an apparatus adapted for sublimation, and apply sufficient heat to cause the vapours of the perchloride to rise into the less heated parts, where they may be condensed.

Comp.— HgCl_2 .

Prop.—Taste acrid, styptic, metallic, durable ; a white, compact, semi-transparent mass of prismatic crystals ; partially decomposed by solution in light. It is soluble in ether, rectified spirit, and water. Its aqueous solution gives a yellow precipitate with caustic potash, a white precipitate with ammonia, and a curdy white precipitate with nitrate of silver. It is sublimed without decomposition and without residue.

Oper.—Stimulant, antisyphilitic, alterative.

Use.—In venereal complaints, with the greatest advantage, when a quick and general action is required ; but its effects are often not permanent. In lepra, combined with antimonials ; in some forms of infantile cachexia, particularly when connected with mesenteric disease, when it may be given in combination with rhubarb and bark ; and in chronic rheumatism. Dissolved in the proportion of gr.ij. to water Oj. as a gargle in venereal sore-throats ; and a little stronger it is useful as gargle in breaking the abscess in cynanche tonsillar. It is applied externally to freckles, and for destroying fungus ; gr.iv. in water Oj. is a good wash in scabies. It may be given per anum when the stomach will not bear it.

Dose.—Gr. $\frac{1}{16}$ to gr. $\frac{1}{8}$ made into a pill, with extract of poppies, once in twenty-four hours. When swallowed as a poison, the best antidote is white of egg.

Off. Prep.—*Liq. Hydrargyri Perchloridi. Lotio Hydrargyri Flava. Hydrarg. lod. Rubrum. Hydrargyrum Ammoniatum.*

HYDRARGYRI PERSULPHAS. Persulphate of Mercury. *Syn.* Hydrargyri Sulphas. (*Hydrargyri, pondere, unc.xx.; Acidi Sulphurici fl.unc.xij.* Heat the mercury with sulphuric acid in a porcelain vessel, stirring constantly till the metal disappears, and continue the heat till a dry white salt remains.)

Comp.— HgSO_4 .

Prop.—A white, crystalline, heavy powder, rendered yellow by water, entirely volatilised by heat.

Oper.—Emetic, alterative.

Use.—Seldom used, except for preparing the perchloride and subchloride of mercury.

HYDRARGYRI SUBCHLORIDUM. Subchloride of Mercury. *Syn.* Calomelas ; Hydrargyri Chloridum ; Calomel. (*Hydrargyri Persulphatis* unc.x.; *Hydrargyri* unc.vij.; *Sodii Chloridi Exsiccati* unc.v.; *Aque Destillate ferrentis* q.s. Rub the mercury and the moistened sulphate together until globules are no longer visible, add the chloride of sodium, and mix by trituration. Sublime by a suitable apparatus, which allows the calomel to fall as a fine powder, which wash and dry at a heat not exceeding 212° F. (100° C.), and preserve in a vessel impervious to light.)

Comp.— HgCl .

Prop.—Inodorous, nearly tasteless ; dull-white heavy powder ; insoluble in water, spirit, or ether. Sublimes, leaving no residue.

Digested with solution of potash it becomes black, and the clear solution acidulated with nitric acid gives a copious white precipitate with nitrate of silver, and by heat is resolved into globules of mercury. Nitrate of silver, solution of lime, or hydrosulphuric acid, when added to water in which it has been washed or boiled, gives no precipitate.

Oper.—Antisyphilitic, alterative; in larger doses purgative.

Use.—As an alterative and specific in various phases of syphilis; as a purgative, generally combined with other remedies, in constipation, dyspepsia, hepatic and cerebral diseases; as an alterative in diseases of children; also in the various stages of the phlegmasiæ, more especially when the serous membranes or the substance of internal organs are the seat of disease, when it is usefully combined with ipecacuanha or antimony, and opium; in dropsy, excepting when the result of Bright's disease, with squills, elaterium, &c.; in rheumatism and cutaneous diseases, with antimonials, guaiacum, and other sudorifics. From its action on the glandular system, it aids the operation of other remedies.

Dose.—Gr.ss. to ij. twice or thrice a day in a pill—if it do not purge, it gradually excites ptialism; gr.ijj. to gr.v. to purge. Children bear comparatively larger doses than adults.

Incomp.—Nitric and hydrochloric acids, alkalis and their carbonates, solution of lime, soaps, sulphides, iron, lead, copper. The bicarbonates of the alkalis do not decompose it.

Off. Prep.—*Lotio Hydrargyri Nigra. Pilula Hydrargyri Subchloridi Composita. Unguentum Hydrargyri Subchloridi.*

HYDRARGYRUM. Mercury. (In its metallic state uncombined.)

Prop.—Fluid above -39° F. ($-39^{\circ}4$ C.) and under 656° F. ($346^{\circ}7$ C.): bright, shining, of a silvery whiteness; sp. gr. when liquid, 13.568. Easily oxidised; volatilised at a heat below that of visible redness, leaving no residue. (Chemical equivalent and symbol 200 Hg.)

Oper.—Metallic quicksilver does not act, except mechanically, on the body, even when taken into the stomach; oxidised, and combined with acids, it acts powerfully.

Use.—It has been exhibited in constriction of the bowels and intussusception, but from a mistaken notion that it would pass through the bowels by its gravity. In constipation it acts by insinuating itself into the hardened fecal mass, and also by mechanical stimulus. When finely divided it acts as a purgative and alterative, after absorption.

Off. Prep.—*Hydrargyrum cum Creta. Empl. Ammoniaci cum Hydrargyro. Empl. Hydrargyri. Linimentum Hydrargyri. Pil. Hydrargyri. Suppositoria Hydrargyri. Ung. Hydrargyri. Ung. Hydrargyri Comp.*

HYDRARGYRUM AMMONIATUM. Ammoniated Mercury. *Syn.* Hydrargyri Præcipitatum Album. Ammonio-chloride, or White Precipitated Mercury. (*Hydrargyri Perchloridi* unc.ijj.; *Liq. Ammoniacæ* fl.unc.iv.; *Aquæ Destillatæ* Oijj. Mix the solution of ammonia with the perchloride dissolved in water, collect, wash and dry the precipitate at a temperature not exceeding 212° F. (100° C.))

Comp.—It may be regarded as a chloride of ammonium, in which two equivalents of hydrogen are replaced by two equivalents of mercury, and its chemical formula is therefore NH_2HgCl .

Prop.—Inodorous, tasteless, snowy white, ponderous, insoluble in water, alcohol, and ether; digested with caustic potash, it evolves

ammonia and becomes yellow, and the fluid, filtered and acidulated with nitric acid, gives a weak precipitate with nitrate of silver. Boiled with a solution of stannous chloride it becomes grey, and affords globules of metallic mercury. Entirely volatilised at a heat under redness. It does not become black when triturated with solution of lime.

Oper.—Detergent, antiparasitic.

Use.—As an external application, united with lard, in scabies and some other cutaneous affections, or to destroy pediculi.

Off. Prep.—*Ung. Hydrargyri Ammoniat.*

HYDRARGYRUM CORROSIVUM SUBLIMATUM. See *Hydrargyri Perchloridum*.

HYDRARGYRUM CUM CRETA. Mercury with Chalk. (*Hydrargyri, pondere, unc.j.*; *Cretæ Preparatæ unc.ij.* Rub the mercury and chalk together till the globules disappear, and the mixture acquires a uniform grey colour.)

Comp.—This preparation appears to consist of metallic mercury in a state of minute division, suboxide of mercury, and carbonate of calcium combined mechanically.

Prop.—A greyish, heavy, insoluble powder, partly dissolved by diluted hydrochloric acid, leaving the mercury in a finely divided state. Chloride of tin throws down no precipitate in the solution with the hydrochloric acid; inodorous, but having an astringent metallic taste.

Oper.—Alterative, purgative, antisyphilitic.

Use.—In infantile syphilis; but generally in venereal complaints its operation is so slow and weak as to merit no attention. An invaluable alterative in visceral diseases of children.

Dose.—Gr.ij. to gr.vii. twice a day, in any viscid substance.

Incomp.—Acids and acidulous salts.

HYOSCYAMI FOLIA. Henbane Leaves. The fresh leaves and flowers with the branches to which they are attached. (*Hyoscyamus niger*. N.O. *Solanaceæ*. Indigenous. ♂)

Comp.—Active principle is hyoscyamine, identical with daturine, and isomeric with atropine.

Prop.—Leaves sinuated, clammy, and hairy; odour narcotic, peculiar; not unlike tobacco when bruised; taste bitter, slightly acrid, lost by drying; virtues yielded to proof spirit.

Oper.—Narcotic, anodyne, antispasmodic, slightly stimulant, dilating the pupil.

Use.—To procure sleep and rest, and to calm irritability in mania and nervous affections; to mitigate pain in neuralgia and spasmodic diseases, in affections of the bronchial and urinary mucous membranes; combined with purgatives it allays griping; externally as a cataplasm in cancer and glandular swellings, or in fine powder sprinkled on cancerous ulcers. It ought not to be prescribed with caustic alkalis, nor with opium or its salts.

Dose.—Gr.ij. to gr.x. of the powder; but generally the extract or tincture is preferred.

Off. Prep.—*Extractum Hyoscyami. Succus Hyoscyami. Tinctura Hyoscyami.*

HYPOSULPHITE OF SODIUM. (Appendix, B.P.) *Syn.* Thiosulphate of Sodium.

Comp.— $\text{Na}_2\text{S}_2\text{O}_3, 5\text{H}_2\text{O}$.

Use.—In the preparation of the volumetric solution which is employed in testing iodine, chlorinated lime, and solutions of chlorinated lime, of chlorine, and of chlorinated soda.

INDIGO. Prepared from several species of the *Indigofera*. Introduced into Appendix I. (B.P.) for making the solution of the sulphate of indigo.

INFUSUM ANTHEMIDIS. Infusion of Chamomile. (*Anthemidis Flor. unc.ss.; Aq. Destill. fervent. fl.unc.x.*) Macerate for fifteen minutes in a covered vessel, and strain.)

Prop.—The odour and taste of the flowers.

Oper.—Tonic; emetic when taken warm.

Use.—The cold infusion in dyspepsia, hysteria, and other complaints attended with debility of the stomach; the warm is employed either alone to excite gentle vomiting, or to assist the operation of other emetics.

Dose.—*Fl.unc.j. to fl.unc.iv.*

Incomp.—Isinglass; infusions of cinchona; solutions of sulphate of iron, nitrate of silver, bichloride of mercury, acetates of lead.

INFUSUM AURANTII. Infusion of Orange Peel. (*Aurant. Cort. unc.ss.; Aquæ Destillatæ ferventis fl.unc.x.* Macerate for fifteen minutes in a covered vessel, and strain.)

Oper.—Tonic, stomachic, stimulant.

Use.—In dyspepsia, particularly that of drunkards; flatulent colic; in gout, united with absorbents; and in the debility which follows acute diseases.

Dose.—*Fl.unc.j. to fl.unc.ij. every four hours.*

Incomp.—Sulphate of iron, acetate of lead, infusion of cinchona bark, solution of lime.

INFUSUM AURANTII COMPÖSITUM. Compound Infusion of Orange Peel. (*Aurantii Corticis unc.½; Limonis Corticis recentis gr.lvj.; Caryophyllorum contus. gr.xxvij.; Aquæ Destillatæ ferventis fl.unc.x.* Infuse in a covered vessel for a quarter of an hour, and strain.)

Oper.—Tonic, stomachic, stimulant, carminative.

Use.—In dyspepsia, particularly that of drunkards; flatulent colic; in gout, combined with absorbents; and in the debility following acute diseases.

Dose.—*Fl.unc.j. to fl.unc.ij. three or four times a day.*

Incomp.—Sulphate of iron, acetate of lead, infusion of cinchona, solution of lime.

INFUSUM BUCHU. Infusion of Buchu. (*Buchu Foliorum contus. unc.ss.; Aquæ Destillatæ ferventis fl.unc.x.* Infuse for half an hour in a covered vessel, and strain.)

Prop.—Odour aromatic; taste slightly bitter, aromatic, and cooling, resembling peppermint.

Oper.—Stimulant, aromatic, tonic, diaphoretic, and diuretic.

Use.—In chronic inflammation of mucous membrane of the bladder, and by the Hottentots in chronic rheumatism.

Dose.—*Fl.unc.j. to fl.unc.iv. twice or thrice a day.*

INFUSUM CALUMBÆ. Infusion of Calumba. (*Calumbæ Radicis concisæ unc.ss.; Aq. Dest. frigide fl.unc.x.* Macerate for half an hour, and strain.)

Prop.—Odour and taste of the root.

Oper.—Tonic without stimulating; stomachic, antiseptic.

Use.—In dyspepsia; and cholera, the vomiting of which it sometimes checks; in bilious remittent fever; to check the nausea and vomiting of pregnancy, and the severe diarrhœa and vomiting often attending dentition; in the hectic of phthisis, to strengthen the digestion; and in the low state of puerperal fever.

Dose.—Fl.unc.j. to fl.unc.ij. three or four times a day.

Incomp.—Tartar emetic, perchloride of mercury, nitrate of silver, acetate of lead, infusion of cinchona.

INFŪSUM CARYŎPHYLLI. Infusion of Cloves. (*Caryophyl. contus. unc.ss.; Aq. Destillatæ fervent. fl.unc.x.* Macerate in a covered vessel for half an hour, and strain.)

Prop.—Odour fragrant; taste warm, aromatic; colour red.

Oper.—Stimulant, tonic, stomachic.

Use.—In atonic gout, when the stomach is affected; and flatulent colic.

Dose.—Fl.unc.j. to fl.unc.iv. three or four times a day.

Incomp.—Sulphate of iron, sulphate of zinc, tartar emetic, nitrate of silver, acetate of lead, infusion of cinchona.

INFŪSUM CASCĂRILLÆ. Infusion of Cascarella. (*Cascarillæ Cort. cont. unc.j.; Aq. Destillatæ fervent. fl.unc.x.* Macerate for half an hour in a covered vessel, and strain.)

Prop.—Odour aromatic; taste bitter and aromatic.

Oper.—Tonic, stomachic.

Use.—As a tonic during convalescence from fevers; in the aphtha gangrænosa of children.

Dose.—Fl.unc.j. to fl.unc.ij. for adults twice or thrice a day.

Incomp.—Infusion of galls, and cinchona; solution of lime; solutions of sulphate of iron, nitrate of silver, acetates of lead.

INFŪSUM CATĚCHU. Infusion of Catechu. (*Catechu contriti gr.clx.; Cinnam. Cort. contusi gr.xxx.; Aq. Destillatæ ferventis fl.unc.x.* Macerate for half an hour in a covered vessel, and strain.)

Oper.—Astringent, stomachic.

Use.—In diarrhœa.

Dose.—Fl.unc.j. to fl.unc.ij., every three hours, or after every loose stool.

Incomp.—Tartar emetic, sulphate of iron, sulphate of zinc, solution of isinglass, infusion of cinchona, the strong acids, perchloride of mercury.

INFŪSUM CHIRĀTÆ. Infusion of Chiretta. (*Chiratæ contusæ unc.½; Aquæ Destillatæ 120° F. (48°·9 C.) fl.unc.x.* Infuse in a covered vessel for half an hour, and strain.)

Prop.—An agreeable bitter.

Oper.—Tonic and aromatic, resembling gentian.

Use.—In dyspepsia and convalescence.

Dose.—From fl.unc.j. to fl.unc.ij. twice or thrice a day.

INFŪSUM CINCHŌNÆ ACIDUM. Acid Infusion of Cinchona. *Syn.* Infusum Cinchonæ. (*Cinchonæ Rubræ Cort. unc.ss.; Acidî Sulphurici Aromatici fl.dr.j.; Aq. Destill. fervent. fl.unc.x.*)

Oper.—Tonic, antiperiodic.

Use.—Like quinine; especially employed during convalescence from acute maladies.

Dose.—Fl.unc.j. to fl.unc.ij. three or four times a day.

Incomp.—Tartar emetic, sulphates of iron and of zinc, nitrate of silver, corrosive sublimate, acetates of lead. Decoction of gal's, solution of lime, carbonates of alkalis, and infusions of almost all the vegetable bitters.

INFŪSUM CUSPĀRĪÆ. Infusion of Cusparia. (*Cuspariæ contritæ* unc.ss.; *Aque Destillatæ* 120° F. (48°·9 C.) fl.unc.x. Macerate for one hour, and strain.)

Prop.—Almost inodorous; taste bitter, and slightly aromatic.

Oper.—Tonic, aromatic, antiseptic, febrifuge.

Use.—In atonic febrile diseases, obstinate bilious diarrhœa, and dysentery, after proper evacuations.

Dose.—Fl.unc.j. to fl.unc.ij. three or four times a day.

Incomp.—Infusion of galls and of catechu; tartar emetic; sulphates of iron and of zinc; nitrate of silver, corrosive sublimate, acetates of lead.

INFŪSUM CŪSSO. Infusion of Koussou. (*Cusso contriti* unc.ss.; *Aq. Destillatæ fervent.* fl.unc.viii. Infuse in a covered vessel for fifteen minutes, and use without straining.)

Prop.—Of yellowish-green colour, and peculiar odour like tea.

Oper.—Anthelmintic.

Use.—In cases of *tænia so'ium*, or *bothriocephalus latus*.

Dose.—Fl.unc.iv. to fl.unc.vii. Castor oil or some aperient should be taken after four or six hours.

INFŪSUM DIGITĀLIS. Infusion of Foxg'ove. (*Digitalis Foliorum exsiccata.* gr.xxviii.; *Aq. Destillatæ ferv.* fl.unc.x. Infuse for fifteen minutes, and strain.)

Prop.—Inodorous, taste bitter and nauseous.

Oper.—Diuretic, sedative.

Use.—In dropsy, cardiac diseases of sthenic character. aneurism, hæmoptysis, phthisis pulmonalis; and in diseases with irregular cardiac action.

Dose.—Fl.dr.ij. to fl.dr.iv. as a diuretic, fl.unc.j. to fl.unc.ij. as a sedative every eight or ten hours, til it affects the kidneys, the pulse, stomach, or bowels; and then stopped.

Incomp.—Sulphate of iron, acetate of lead; infusion of cinchona.

INFŪSUM ERGŌTÆ. Infusion of Ergot. (*Ergotæ contritæ* unc.¼; *Aque Destillatæ ferventis* fl.unc.x. Infuse for half an hour, and strain.)

Prop.—Odour faint; taste acrid and disagreeable.

Oper.—Stimulant, emmenagogue, acting chiefly on the muscular coat of the uterus.

Use.—In parturition when the pains languish, and the uterine action becomes torpid, provided the os uteri be fully dilated, and the membranes ruptured. In leucorrhœa, chlorotic amenorrhœa, and to promote the evacuation of substances contained in the uterus. To prevent or arrest post-partum hæmorrhage.

Dose.—During parturition fl.unc.ij. repeated at intervals of half an hour unless its effects be sooner produced; in other cases fl.dr.ss. to fl.unc.j.

INFŪSUM GENTIĀNÆ COMPOSITUM. Compound Infusion of Gentian. (*Gentianæ Radicis concisæ, Aurantii Corticis concisi,* āā gr.lv.; *Limonis Corticis recentis* unc.¼; *Aque Destillatæ ferventis* fl.unc.x. Infuse in a covered vessel for half an hour, and strain.)

Oper.—Tonic, stomachic.

Use.—In dyspepsia and in chlorosis; diarrhoea and gout.

Dose.—Fl.unc.j. to fl.unc.ij. three times a day.

Incomp.—Acetates of lead.

INFUSUM JABORANDI. Infusion of Jaborandi. (*Jaborandi concisi* unc.ij.; *Aq. Destill. fervent.* fl.unc.x. Infuse in a covered vessel for half an hour, and strain.)

Prop.—Taste slightly bitter, pungent; odour aromatic.

Oper.—Sialagogue, sudorific.

Use.—In dropsical effusions, in acute bronchitis, asthma, diphtheria.

Dose.—Fl.unc.j. to fl.unc.ij.

INFUSUM KRAMĒRIÆ. Infusion of Rhatany. (*Krameria Radicis pulverizata* unc.ss.; *Aquæ Destillatæ ferventis* fl.unc.x. Macerate for half an hour in a covered vessel, and strain.)

Prop.—Earthy odour, taste powerfully astringent.

Oper.—Tonic, astringent.

Use.—In chronic diarrhoea; as a gargle in relaxation of the uvula; as lotion to spongy gums; leucorrhœa, prolapsus ani.

Dose.—Fl.unc.j. to fl.unc.ij.

INFUSUM LINI. Infusion of Linseed. (*Lini Sem.* gr.cl.; *Glycyrrh. Rad. recentis* con. gr.l.; *Aq. Destillatæ ferv.* fl.unc.x. Infuse in a covered vessel for four hours, and strain.)

Prop.—Inodorous, sweetish, mucilaginous.

Oper.—Demulcent.

Use.—In catarrh, pneumonic affections, strangury, gonorrhœa; and after operations on the urethra or the bladder.

Dose.—Ad libitum.

Incomp.—Alcohol, acetates of lead.

INFUSUM LUPULI. Infusion of Hop. (*Lupuli* unc.ss.; *Aq. Dest. ferv.* fl.unc.x. Infuse in a covered vessel for one hour, and strain.)

Prop.—Taste aromatic, bitter, odour agreeable.

Oper.—Tonic, slightly narcotic.

Dose.—Fl.unc.j. to fl.unc.ij.

INFUSUM MATICÆ. Infusion of Matico. (*Maticæ Foliorum concisi* unc.ss.; *Aquæ Destillatæ ferventis* fl.unc.x. Infuse for half an hour in a covered vessel, and strain.)

Prop.—Taste astringent and aromatic; odour aromatic, somewhat resembling that of sage.

Oper.—Styptic and astringent.

Use.—In vesical catarrh and hæmorrhages from nose, bowels, bladder, and uterus; externally in hæmorrhages.

Dose.—Fl.unc.j. to fl.unc.iv.

INFUSUM QUASSIÆ. Infusion of Quassia. (*Quassia Ligni concisi* gr.lv.; *Aquæ Destillatæ frigidæ* fl.unc.x. Infuse for half an hour, and strain.)

Prop.—Inodorous; taste a very pure bitter; limpid; possessing no astringency.

Oper.—Tonic, antiseptic.

Use.—In bilious fevers, united with alkaline salts; hysteria, with camphor and tincture of valerian; gout, with aromatics and ginger; and in dyspepsia, with sulphate of zinc, or with mineral acids.

Dose.—Fl.unc.j. to fl.unc.ij. twice or thrice a day.

Incomp.—Acetate of lead, nitrate of silver.

INFŪSUM RHĒL. Infusion of Rhubarb. (*Rhei Rad. concisæ* unc. $\frac{1}{4}$; *Aq. Destillatæ ferv.* fl.unc.x. Infuse for half an hour in a covered vessel, and strain.)

Prop.—Odour fragrant like that of the root; taste bitter, and aromatic; limpid; red-yellow; not so astringent as the root.

Oper.—Purgative, stomachic.

Use.—In costiveness; and united with ginger and aromatics, in diarrhœas from weakness of the bowels.

Dose.—Fl.unc.j. to fl.unc.ij. united with neutral salts; fl.unc.ss. with tinct. of cinnamon, where its stomachic effect only is required.

Incomp.—Solution of isinglass, infusion of cinchona, all the strong acids, nitrate of silver, corrosive sublimate, acetates of lead, sulphate of iron, tartar emetic, magnesia.

INFŪSUM ROSÆ ACĪDUM. Acid Infusion of Roses. (*Rosæ Gallicæ Petalorum contrit.* unc. $\frac{1}{4}$; *Aquæ Destillatæ ferventis* fl.unc.x.; *Acidi Sulph. Diluti* fl.dr.j. Add the acid to the water, infuse the petals in the mixture in a covered vessel for half an hour, and strain.

Prop.—Odour of the rose; taste slightly austere, acid, and sweet.

Oper.—Sub-astringent, refrigerant.

Use.—In the colligative sweats of phthisis; and with additional acid and some nitre, in uterine and pulmonary hæmorrhages; topically as a gargle in cynanche tonsillaris. The infusion is an elegant vehicle for many active remedies, particularly sulphate of magnesium, the nauseous taste of which it covers.

Dose.—Fl.unc.j. to fl.unc.ij. every three or four hours.

Incomp.—Sulphates of iron and zinc, alkalis, earths.

INFŪSUM SENĖGÆ. Infusion of Senega. (*Senegæ Radicis contusæ* unc.ss.; *Aquæ ferventis* fl.unc.x. Digest for half an hour, and strain.)

Prop.—Inodorous; taste nauseous; acrid.

Oper.—Stimulating expectorant.

Use.—In advanced stages of chronic bronchitis and pneumonia; in aged persons, when the bronchial secretion is inordinate.

Dose.—Fl.unc.j. to fl.unc.ij.

INFŪSUM SENNÆ. Infusion of Senna. (*Sennæ* unc.j.; *Zingiberis con.* gr.xxvij.; *Aquæ Destillatæ ferv.* fl.unc.x. Infuse for half an hour in a covered vessel, and strain.)

Oper.—Purgative.

Use.—In constipation, and to move the bowels in acute diseases; the ginger counteracts the griping quality of the senna. It is generally united with neutral purgative salts and manna.

Dose.—Fl.unc.j. to fl.unc.ij.

Off. Prep.—*Mistura Sennæ Composita.*

INFŪSUM SERPENTĀRIÆ. Infusion of Serpentry. (*Serpentariæ Rhizomatis* unc. $\frac{1}{4}$; *Aq. Dest. ferv.* fl.unc.x. Infuse in a covered vessel for half an hour, and strain.)

Oper.—Excitant, diaphoretic, tonic.

Use.—In cases of debility, especially after acute diseases, as typhus, when it acts most beneficially in combination with carbonate of ammonium. It is given when the tongue is dry, and brown or black, and the pulse low.

Dose.—Fl.unc.j. to fl.unc.ij.

Incomp.—Strong acids, solution of lime, solutions of nitrate of silver,

perchloride of mercury, acetates of lead, tartar emetic, and infusion of cinchona.

INFŪSUM UVÆ URSI. Infusion of Bearberry. (*Uvæ Ursi Fcl.* unc.ss.; *Aq. Destillatæ ferventis* fl.unc.x. Infuse in a covered vessel for one hour, and strain through calico.)

Comp.—Tannin and gallic acid.

Oper.—Astringent, diuretic.

Use.—In diseases of the uro-genital organs, catarrh of the pelvis of the kidney, bladder, and urethra.

Dose.—Fl.unc.j. to fl.unc.ij.

INFŪSUM VALERIĀNÆ. Infusion of Valerian. (*Valerianæ Rhizomatis contusi* unc. $\frac{1}{4}$.; *Aquæ Destillatæ ferventis* fl.unc.x. Infuse for an hour, and strain.)

Oper.—Tonic, antispasmodic.

Use.—In hysteria and neuralgia.

Dose.—Fl.unc.j. to fl.unc.ij. twice or thrice a day.

Incomp.—Nitrate of silver, sulphate of iron, infusion of cinchona.

INJECTIO APOMORPHINÆ HYPODERMICA. Hypodermic Injection of Apomorphine. (*Apomorphinæ Hydrochloratis* gr.ij.; *Aquæ Camphoræ* min.c. Dissolve and filter. To be made when required for use.)

Oper.—Emetic, expectorant.

Use.—Bronchitis, croup, catarrh, also in cases of poisoning.

Dose.—Min.ij. to min. viij. subcutaneously.

INJECTIO ERGOTINI HYPODERMICA. Hypodermic Injection of Ergotin. (*Ergotini* gr.c.; *Aquæ Camphoræ* fl.gr.cc. To be made when required for use.)

Oper.—Emmenagogue.

Use.—Subcutaneously to cause uterine contraction, to prevent post-partum hæmorrhage; also in menorrhagia and in uterine fibroids.

Dose.—Min.ij. to min.x. subcutaneously.

INJECTIO MORPHINÆ HYPODERMICA. Hypodermic Injection of Morphine. (*Morphinæ Hydrochloratis* gr.xcij.; *Liquoris Ammoniaci Acetici*, *Aquæ Destillatæ*, aa q.s. Precipitate the morphine by the solution of ammonia, and redissolve the precipitate in the acetic acid, so that a solution of the acetate of morphine is obtained, containing one grain of the acetate in ten minims of the injection.)

Prop.—A clear, slightly acid solution; a fluid drachm rendered slightly alkaline by solution of ammonia yields a precipitate of morphine, which, after being washed and dried, should weigh 4.25 grains, corresponding to 6 grains of the acetate.

Oper.—The same as morphine administered by mouth.

Use.—In all cases in which the administration of morphine by the mouth is not advisable; as, for instance, when nausea is present.

Dose.—By subcutaneous injection, min.j. to min.v.

IODŌFORMUM. Iodoform. A product of the action of iodine on a mixture of alcohol and solution of carbonate of potassium.

Comp.—CHI₃.

Prop.—Shining lemon-yellow crystalline scales; odour and flavour persistent, disagreeable; slightly soluble in water, more soluble in rectified spirit, chloroform, or ether. When heated it melts to a brown liquid and gives off brown and violet vapours.

Oper.—Antiseptic ; local anæsthetic.

Use.—In gonorrhœa and ozæna, locally applied. Also internally as a substitute for iodine in scrofula, rickets, syphilis.

Dose.—Gr.ss. to gr.iiij.

Off. Prep.—*Suppositoria Iodoformi. Unguentum Iodoformi.*

IÖDUM. Iodine. (So called from *ιώδης*, violet. Prepared from the ashes of sea-weeds and from mineral iodides and iodates.)

Prop.—Crystals small, laminar ; in colour and general aspect resembles black-lead (*plumbago*), with the odour of chlorine ; volatilises when heated, producing a violet-coloured vapour. Soluble in ether and alcohol, very sparingly soluble in water, but freely dissolved by solution of iodide of potassium. The aqueous solution strikes a deep blue colour with starch. Sublimes without residue ; and the portion first coming over does not include any slender colourless prisms emitting a pungent odour. 12·7 grs. dissolved in an ounce of water containing 15 grs. of iodide of potassium require for complete discoloration 1000 grain-measures of the volumetric solution of the hyposulphite of sodium.

Oper.—Stimulant, absorbent, emmenagogue, giving rise occasionally during elimination to a condition called *Iodism*, the symptoms of which are nausea, headache, coryza, languor, anorexia, followed by vomiting and purging, extreme depression, frequent small pulse, great weakness, faintings, cough, bronchitis, terminating in death.

Use.—In bronchocele and other glandular swellings, not of scirrhus nature ; to bring on menstruation in young females, in whom it has not occurred ; to assist the cicatrization of venereal ulcers. Externally as a counter-irritant to indolent tumours, enlarged glands, and to the chest, in certain stages of phthisis, pneumonic and pleuritic effusions, &c.

Off. Prep.—*Arsenii Iodidum. Iodoformum. Linimentum Iodi. Liq. Iodi. Pilula Ferri Iodidi. Potassii Iodidum. Sodii Iodidum. Sulphuris Iodidum. Syrupus Ferri Iodidi. Tinctura Iodi. Unguentum Iodi.*

IPĖCACUĀNHA. *Ipecacuanha* ; the root, dried. (*Cephaelis Ipecacuanha*. N.O. *Cinchonaceæ*. Brazils.)

Prop.—Odour faint and peculiar ; taste bitter, subacid, aromatic, mucilaginous ; in small annulated pieces, twisted, somewhat fissured and encircled by deep grooves ; colour brown of various shades ; it consists of two parts, the cortical or active portion which is brittle, and a slender tough white woody centre ; powder pale-brown ; both water and alcohol extract its virtues, which have been found to depend on a peculiar principle, named *emetine*.

Oper.—Emetic in large doses ; sudorific, expectorant, in smaller.

Use.—To produce vomiting in the commencement of fevers, phthisis, inflammatory diseases, buboes, swelled testicles and before the paroxysms of ague ; to excite nausea in dysentery, asthma, pertussis, hæmorrhages, pneumonia ; to aid expectoration in pulmonary disease ; and, combined with opium, to produce diaphoresis in rheumatism, gout, and febrile disorders. It is the safest remedy in the pulmonary affections of children. It is a useful adjunct to purgatives.

Dose.—As an emetic, gr.xv. to gr.xxx. alone or united with tartar emetic gr.j. ; as an expectorant, gr.ss. to gr.ij.

ISINGLASS. (Appendix, B.P.) The swimming bladder or sound of various species of *Acipenser*.

Use.—To prepare the test solution employed in testing tannic and gallic acids.

JABORANDI. *Jaborandi.* *Syn.* *Pilocarpi Foliola.* Dried leaflets. (*Pilocarpus pennatifolius.* N.O. *Rutaceae.*)

Comp.—A liquid alkaloid, pilocarpine ($C_{11}H_{16}N_2O_2$), and an isomeric alkaloid, jaborine.

Prop.—Leaflets shortly stalked, four inches long. Upper surface dull green, under surface paler and marked irregularly with pellucid dots. Odour slightly aromatic; taste bitter and aromatic, subsequently pungent and increasing the flow of saliva.

Oper.—Sialagogue, diaphoretic.

Use.—To produce free diaphoresis in acute bronchitis, &c.; also in the dropsy of Bright's disease. Occasionally in uræmic convulsions. It has not been found of much value in other forms of convulsions.

Dose.—Gr.v. to gr.xx., in powder.

Off. Prep.—*Extractum Jaborandi.* *Infusum Jaborandi.* *Pilocarpinæ Nitras.* *Tinctura Jaborandi.*

JALĀPA. *Jalap.* Dried tubercles. (*Ipomœa Purga* (*Exogonium Purga*). N.O. *Convolvulaceæ.* Mexico. I_2)

Comp.—Resin 10 to 15 per cent., watery extractive, starch, &c. The resin contains *Convolvulin* ($C_{31}H_{50}O_{16}$) homologous with *Jalapin*.

Prop.—Odour slightly nauseous; taste nauseous and acrid; varying from the size of a nut to that of an orange, ovoid; solid, hard, heavy, brittle; fracture resinous; internally light grey, externally covered with a deep brown, wrinkled bark. Rectified spirit is its proper menstruum.

Oper.—Hydragogue, cathartic: the resinous part gripes violently.

Use.—In constipation, mania, worms, and as a hydragogue in dropsy. It is also a good adjunct to quicken the operation of subchloride of mercury, and other purgatives of slow operation. A drop of essential oil prevents it griping.

Dose.—Of the powder, gr.x. to gr.xxx.

Off. Prep.—*Extractum Jalapæ.* *Pulvis Jalapæ Comp.* *Pulvis Scammonii Comp.* *Jalapæ Resina.* *Tinct. Jalapæ.*

JALĀPÆ RESĪNA. Resin of Jalap. (*Jalapæ contritæ* unc.viij.; *Spiritus Rectificati* q.s.; *Aqueæ Destillatæ* q.s. The aqueo-spirituos extract evaporated and dried.)

Prop.—In dark-brown opaque fragments, translucent at the edges, brittle, with resinous fracture, sweetish odour, acrid taste; soluble in rectified spirit, partially so in ether, and insoluble in oil of turpentine.

Oper.—Hydragogue, cathartic.

Use.—Vide *Jalapa*.

Dose.—Gr.ij. to gr.v.

Off. Prep.—*Pilula Scammonii Comp.*

JUNĪPĒRI OLĒUM. See *Oleum Juniperi*.

KAMĀLA. *Kamala.* The powder which consists of the minute glands that adhere to the fruits. (*Mallotus philippinensis* (*Rottlera tinctoria*). N.O. *Euphorbiaceæ.* India.)

Prop.—Granular; colour orange-red; inflammable; sparingly miscible with water; forms red solution with alcohol, ether, or chloroform. It should be free from sand and earthy impurities.

Oper.—Anthelmintic and purgative.

Use.—In tænia.

Dose.—Gr.xxx. to unc. $\frac{1}{4}$ in any thick fluid.

KINO. Kino. Juice obtained from incisions of the trunk, inspissated. (*Pterocarpus Marsupium*. N.O. *Leguminosæ*. Ma'abar.)

Comp.—Tannin and catechu, and insoluble matter.

Prop.—Inodorous; taste sweetish, bitter; sometimes gritty between the teeth; in fragments of a dark ruby-red colour; easily pulverised; powder reddish brown; more soluble in warm than in cold water.

Oper.—Astringent, tonic.

Use.—In obstinate chronic diarrhœa; relaxation of throat; uterine, intestinal, and pulmonary hæmorrhages; leucorrhœa.

Dose.—Gr.x. to gr.xxx. in powder.

Incomp.—The mineral acids, alkalis and their carbonates, acetates of lead, nitrate of silver, tartar emetic, sulphate of iron, perchloride of mercury.

Off. Prep.—*Pulv. Catechu Comp.* *Pulvis Kino Comp.* *Tinctura Kino.*

KOUSSO. Vide *Cusso*.

KRAMĒRIÆ RADIX. Rhatany Root. (1. Peruvian Rhatany, *Krameria triandra*. 2. Savanilla Rhatany, *Krameria Ixina* (*Krameria tomentosa*). N.O. *Polygalacæ*. l $\frac{1}{2}$)

Comp.—Tannin, gallic acid, krameric acid.

Prop.—Peruvian Rhatany is dark reddish brown externally, bright brownish red internally; bark rough and scaly. Savanilla Rhatany is dark purplish or violet, and has a smooth, thicker bark. Both are astringent, tinging the saliva, and communicate a deep red colour both to water and to spirit.

Oper.—Astringent, tonic, diuretic, detergent.

Use.—In dysentery, diarrhœa, passive hæmorrhages; in ulceration of the gums, and as a stomachic in dyspepsia.

Dose.—Gr.xx. to gr.lx. in powder.

Off. Prep.—*Extractum Kramericæ.* *Infusum Kramericæ.* *Pulvis Catechu Compositus.* *Tinctura Kramericæ.*

LAC. Milk. The fresh milk of the cow, *Bos Taurus*. Mammalia.

Oper.—Nutritious, emollient.

Use.—In the preparation of *Mistura Scammonii*.

LACTUCA. Lettuce. The flowering herb. (*Lactuca virosa*. N.O. *Compositæ*. Indigenous. ♂)

Prop.—Odour strong, narcotic like opium; taste bitter.

Oper.—Narcotic, diuretic, diaphoretic, gently laxative.

Use.—In dropsies from visceral obstructions, coughs, phthisis pulmonalis, and all painful affections.

Off. Prep.—*Extractum Lactuce.*

LAMELLÆ ATRÖPİNÆ. Discs of Atropine. (Discs of gelatine, with some glycerine, each weighing about $\frac{1}{30}$ grain, and containing $\frac{1}{5000}$ grain of sulphate of atropine.)

Oper.—Mydriatic.

Use.—To cause dilatation of the pupil and to paralyse the muscles of accommodation. To reduce tension in corneal ulcer and glaucoma.

LAMELLÆ CŌCAINÆ. Discs of Cocaine. (Discs of gelatine, as above, each containing $\frac{1}{300}$ grain of hydrochlorate of cocaine.)

Oper.—Local anæsthetic.

Use.—To cause local anæsthesia of the eye during ophthalmic operations.

LAMELLÆ PHYSOSTIGMINÆ. Discs of Physostigmine. (Discs, as above, each containing $\frac{1}{1000}$ grain of physostigmine.)

Oper.—Myositic.

Use.—To cause contraction of the pupil, to counteract effects of atropine. The discs are applied to the conjunctiva. They may be preserved unchanged for a length of time.

LARĪCIS CORTEX. Larch Bark. The bark, collected in spring, deprived of its outer layer and dried. (*Pinus Larix* (*Abies Larix*). N.O. *Coniferæ*.)

Comp.—Contains an oleo-resin, Venetian turpentine, with aromatic astringent taste and agreeable odour. It closely resembles ordinary crude turpentine. Also tannin.

Oper.—Astringent.

Use.—For its action on bronchial tubes, in chronic bronchitis and in bronchial hæmorrhage.

Off. Prep.—*Tinctura Laricis*.

LAUROCERĀSI FOLIĀ. Cherry-laurel Leaves. (*Prunus Laurocerasus*. N.O. *Rosaceæ*.) The fresh leaves from indigenous plants.

Comp.—Volatile oil.

Prop.—Ovate, lanceolate or elliptical, distantly toothed, furnished with glands at the base, smooth, shining, deep green, on strong short petioles; inodorous except on bruising, when the odour resembles that of bitter almonds and hydrocyanic acid.

Oper.—Sedative.

Use.—The powdered leaves are sometimes spread upon a linseed-meal poultice and applied to painful ulcers.

Off. Prep.—*Aqua Laurocerasi*.

LICHEN CETRARĪA. Vide *Cetraria*.

LIMŌNIS CORTEX, SUCCUS, OLĒUM. Lemon Peel, Juice and Oil of Lemon. (*Citrus Limonum*. N.O. *Aurantiaceæ*. South of Europe. 2.)

Prop.—Odour of the fruit fragrant, depending on the essential oil, which gives the rind its warm bitter taste; the juice is sharp, but gratefully acid; sp.gr. 1·035 to 1·045; quantity of citric acid in an ounce 36 to 46 grs.; it also contains malic and phosphoric acids, extractive, saccharine mucilage, and water; soon spoils. The rind contains volatile oil, bitter extractive, and a little gallic acid.

Oper.—Juice refrigerant; bark and oil aromatic and stomachic.

Use.—The juice as a beverage, diluted with water and sweetened, is useful in febrile and inflammatory complaints, cooling and quenching thirst; alone, or combined with wine, in scorbutus; with camphor mixture, decoction of cinchona, or wine, in putrid sore throats, remittent fevers, diabetes, and occasionally employed in acute rheumatism.

Dose.—Of the juice, fl.dr.j. to fl.dr.iv. or more, two or three times a day; fl.unc.j. or more, thrice a day in rheumatism; diluted ad libitum.

Off. Prep.—Cortex: *Infusum Aurantii Compositum*. *Infusum Gentianæ Compositum*. *Oleum Limonis*. *Syrupus Limonis*. *Tinctura Limonis*. Succus: *Syrupus Limonis*. Oleum: *Linimentum Potass. Iod. c. Sap.* *Spir. Ammonice Aromat.*

LĪNĪ FARĪNA ET SEMĪNA. Linseed Meal and Seeds. (*Linum usitatissimum*. N.O. *Linaceæ*. Indigenous. ☉)

Prop.—Small, oval, pointed, flat, with acute edges, smooth, shining, brown externally, yellowish white within; mucilaginous; taste oily.

Oper.—Emollient, demulcent.

Use.—In irritation of mucous membrane; the meal to make poultices.

Dose.—Vide *Infusum Lini*.

Off. Prep.—*Farina: Cataplasma Lini. Cataplasma Carbonis. Cataplasma Conii. Catapl. Sinapis. Catapl. Sodæ Chlorinatæ. Semina: Lini Farina. Infusum Lini. Oleum Lini.*

LĪNĪMENTUM ACONĪTI. Liniment of Aconite. (*Aconiti Radicis* unc.xx.; *Camphoræ* unc.j.; *Spiritus Rectificati* quant. suff. Moisten the aconite with some spirit and macerate in a close vessel for three days, then add more spirit, and percolate slowly into a receiver containing camphor, until the product measures 30 fluid ounces.) One fluid ounce and a half represent one ounce of the dried root.

Oper.—Anodyne.

Use.—In rheumatism and neuralgia, to be applied with a brush.

LĪNĪMENTUM AMMŌNĪÆ. Liniment of Ammonia. (*Liquoris Ammoniacæ* fl.unc.j.; *Olei Olivæ* fl.unc.ij. Mix together with agitation.)

Oper.—Stimulant, rubefacient, diaphoretic.

Use.—In cynanche tonsillaris, spread on a piece of flannel, and applied round the throat; when the skin is very irritable, a larger proportion of oil is requisite.

LĪNĪMENTUM BELLĀDONNÆ. Belladonna Liniment. (*Belladonnæ Rad.* unc.xx.; *Camphoræ* unc.j.; *Spir. Rect.* q.s. An alcoholic solution of belladonna and camphor. One fluid ounce and a half contain one ounce of belladonna.)

Oper.—Anodyne.

Use.—In neuralgic and spasmodic affections, in combination with other liniments. Too strong for separate use.

LĪNĪMENTUM CALCIS. Liniment of Lime. Carron Oil. (*Liquoris Calcis, Olei Olivæ*, āā fl.unc.ij. Mix with agitation.)

Oper.—Cooling, emollient.

Use.—To burns and scalds, spread thick upon lint, and applied over the affected parts.

LĪNĪMENTUM CAMPHŌRÆ. Liniment of Camphor. (*Camphoræ* unc.j.; *Olei Olivæ* fl.unc.iv.)

Oper.—Stimulant, anodyne.

Use.—To glandular swellings, sprains, bruises, and joints affected with chronic rheumatic pains, applied by friction.

Off. Prep.—*Linimentum Chloroformi. Linimentum Hydrargyri. Lin. Terebinthinæ Aceticum.*

LĪNĪMENTUM CAMPHŌRÆ COMPOSITUM. Compound Liniment of Camphor. (*Camphoræ* unc.ijss.; *Olei Lacundulæ* fl.dr.j.; *Spiritus Rectificati* fl.unc.xv.; *Liquoris Ammoniacæ fortior.* fl.unc.v. Dissolve the camphor and the oil in spirit, and add the solution of ammonia, and agitate till a clear solution is formed.)

Oper.—Stimulant, anodyne.

Use.—To sprains, bruises, and chronic rheumatic pains. Except in rare cases, too strong to be used undiluted.

Incomp.—All acids, water.

LINIMENTUM CHLOROFORMI. Liniment of Chloroform. (Prepared by mixing equal parts of Chloroform and Camphor Liniment.)
Oper.—Sedative and stimulant.

Use.—In neuralgia, spasms; and, combined with the liniment of aconite, in chronic rheumatic affections.

LINIMENTUM CROTŌNIS. Liniment of Croton Oil. (*Olei Crotonis* fl.unc.j.; *Olei Cajuputi*, *Spiritus Rectificati*, āā fl.unc.iiijss. Mix.)

Oper.—Epispastic.

Use.—In sprain, spasmodic pain, and affections of the chest.

LINIMENTUM HYDRARGYRI. Liniment of Mercury. (*Ung. Hydrarg.* unc.j.; *Liq. Ammoniac* fl.unc.j.; *Linimenti Camphorae* fl.unc.j. 1 fl.dr. contains about 10 gr. of mercury.)

Oper.—Stimulant, discutient.

Use.—To parts affected with chronic venereal pains, nodes, and topi; to indolent swellings, and to promote absorption of collections of fluids; fl.dr.j. rubbed on the affected parts night and morning.

LINIMENTUM IŌDI. Liniment of Iodine. (*Iodi* unc.j.½; *Potassii Iodidi* unc.ss.; *Glycerini* unc.½; *Spir. Rectificati* fl.unc.x.)

Oper.—Counter-irritant and vesicant.

Use.—In bronchocele and glandular swellings, chronic enlargement of joints; in various pulmonary affections.

LINIMENTUM OPII. Liniment of Opium. (A mixture of equal parts of *Tinctura Opii* and *Linimentum Saponis*.)

Use.—To allay pains; and to procure sleep when opium cannot be taken into the stomach.

LINIMENTUM POTASSII IODIDI CUM SAPŌNE. Liniment of Iodide of Potassium and Soap. (*Saponis Animalis* unc.ij.; *Potassii Iodidi* unc.jss.; *Glycerini* fl.unc.j.; *Olei Limonis* fl.dr.j.; *Aquae Destillatae* fl.unc.x. Mix the soap with the water and glycerine over a water-bath. When dissolved mix briskly with the iodide of potassium, previously powdered. Add the oil of lemon when the mixture is cold.)

Oper.—Alterative and resolvent.

Use.—In glandular enlargement, and affections of joints.

LINIMENTUM SAPŌNIS. Liniment of Soap. (*Saponis* unc.ij.; *Camphorae* unc.j.; *Aquae Destillatae* fl.unc.iv.; *Olei Rosmarini* fl.dr.iiij.; *Spiritus Rectificati* fl.unc.xvj. Mix the water with the spirit and add the oil, soap, and camphor; macerate for 7 days at a temperature not exceeding 70° F. (21° C.), with occasional agitation, and filter.)

Oper.—Stimulant, anodyne.

Use.—Against local pains rubbed on the part; with the addition of tincture of cantharides, and of opium, we have found this liniment of great use in allaying the violent pains of colic, and procuring sleep.

Off. Prep.—*Linimentum Opii*.

LINIMENTUM SINĀPIS COMPŌSĪTUM. Compound Liniment of Mustard. (*Olei Sinapis* fl.dr.j.; *Extracti Mezerei Aetherei* gr.x.; *Camphorae* gr.cxx.; *Olei Ricini* fl.dr.v.; *Sp. Rectificati* fl.unc.iv. Dissolve the extract and camphor in the spirit, then add the oil of mustard and the castor oil.)

Oper.—Stimulant, irritant.

Use.—In the same class of cases as the mustard poultice.

LINIMENTUM TEREBINTHINÆ. (*Sapon. Moll. unc.ij.*; *Aquæ Destillatæ fl.unc.ij.*; *Camphoræ unc.j.*; *Olei Terebinth. fl.unc.xvj.* Mix the soap with water; dissolve the camphor in the oil, and mix thoroughly.)

Oper.—Stimulant.

Use.—To parts chronically inflamed; to burns; first used for this purpose by Dr. Kentish, then a surgeon in Newcastle.

LINIMENTUM TEREBINTHINÆ ACETICUM. Liniment of Turpentine and Acetic Acid. (*Olei Terebinth., Linimenti Camphoræ, aa fl.unc.iv.*; *Acidi Acetici Glac. unc.j.*)

Oper. & Use.—More powerful than the former, and used in chest diseases and similar cases.

LĪQUOR ACĪDI CHRŌMICI. Solution of Chromic Acid. (*Acidi Chromici unc.j.*; *Aquæ Destillatæ fl.unc.ij.* Dissolve.)

Comp.—The equivalent of 25 per cent. of anhydrous chromic acid, or chromic anhydride, CrO_3 ; or 29.5 per cent. of real chromic acid, H_2CrO_4 .

Prop.—Orange-red, inodorous, caustic; strongly acid; sp.gr. 1.185.

Oper.—Powerful caustic.

Use.—In local treatment of poisoned wounds, sluggish ulcers, carcinoma. Also for corns, warts, condylomata, &c. It should be applied with a pointed glass rod.

LĪQUOR AMMŌNĪÆ. Solution of Ammonia. (*Liq. Ammonia Fort. Oj.*; *Aquæ Destillatæ Oij.*)

Comp.—Ammoniacal gas (NH_3) 10 parts, and water 90 parts, when of a sp. gr. 0.959.

Prop.—Odour pungent, strong, peculiar; taste hot, pungent; is colourless, transparent; rapidly absorbs carbonic acid from the atmosphere, evaporates and hence requires to be well corked.

Oper.—Stimulant, antacid, rubefacient.

Use.—Largely diluted in asphyxia, acidities of the primæ viæ, and in hysteria; externally it is applied to the nostrils in fainting; a rag moistened with it, and laid over the epigastrium, sometimes raises an instantaneous blister, and always proves useful in spasms, and gout of the stomach; a liniment composed of camphor gr.lx. dissolved in olive oil fl.unc.j. and solution of ammonia fl.unc.ij. is an excellent application to parts affected with deep-seated inflammation.

Dose.—Min.v. to min.xxx. diluted with water or milk.

Incomp.—All the metallic salts, the acids, alum.

Off. Prep.—*Linimentum Ammonia.* *Linimentum Hydrargyri.* *Tinct. Quinina Ammoniata.*

LĪQUOR AMMŌNĪÆ FORTIOR. Strong Solution of Ammonia.

Comp.—Ammoniacal gas (NH_3) dissolved in water, and constituting 32.5 per cent. of the solution.

Prop.—Colourless, strongly pungent, with strong alkaline reaction. Sp. gr. .891. 52.3 grs. by weight require for neutralisation 1000 grain-measures of the volumetric solution of oxalic acid. One fl.dr. contains 15.83 grains of ammonia. Diluted with four times its volume of distilled water, it gives no precipitate with solution of lime, oxalate of ammonium, sulphide of ammonium, or ammonio-sulphate of copper; and when treated with an excess of nitric acid, is not rendered turbid by nitrate of silver or chloride of barium. It may be reduced to the strength of liquor ammonia by adding 2 ounces of distilled water to each ounce.

Oper.—Escharotic, vesicant.

Use.—As a rubefacient when combined with oil; as an instantaneous vesicant in gout of the stomach.

Off. Prep.—*Ammonii Phosphas.* *Lin. Camphoræ Comp.* *Liq. Ammoniacæ.* *Liq. Ammonii Citratis.* *Spir. Ammoniacæ Arom.* *Spir. Ammoniacæ Foetidus.* *Tinct. Opii Ammoniata.*

LĪQUOR AMMŌNĪI ACETATIS. Solution of Acetate of Ammonium. (*Liq. Ammonii Acet. Fort.* fl.unc.iv.; *Aquæ Destillatæ* ad fl.unc.xx.)

Comp.—Acetate of ammonium ($\text{NH}_4\text{C}_2\text{H}_3\text{O}_2$), water.

Prop.—Inodorous; taste neutral, nauseous; colourless; neutral; sp.gr. 1.022; colour not affected by litmus, turmeric, or hydrosulphuric acid, giving no precipitate with chloride of barium. The precipitate with nitrate of silver is redissolved by nitric acid. If potash be added, it gives off ammonia; if sulphuric acid, acetic acid vapours. The residue, after evaporation, is entirely destroyed by fire.

Oper.—Diaphoretic; externally cooling, astringent.

Use.—Diluted, in febrile and inflammatory complaints; as a lotion, to inflamed surfaces, sprains, and fractures; diluted with rose-water, a good collyrium; and still more diluted, an injection in the commencement of gonorrhœa. Combined with extractum opii liquidum it allays itching.

Dose.—Fl.dr.ij. to fl.dr.vj.

Incomp.—Acids, alkalis.

LĪQUOR AMMŌNĪI ACETATIS FORTIOR. Strong Solution of Acetate of Ammonium. (*Ammonii Carbonatis* unc.xvijss.; *Acidi Acetici* unc.l. vel q.s.; *Aquæ Destill.* q.s. Acetic acid is added to the carbonate of ammonium until a neutral liquid results; this is then made up to three pints with distilled water. Sp. gr. 1.073.)

Comp.— $\text{NH}_4\text{C}_2\text{H}_3\text{O}_2$, with water.

Oper. & Use.—Those of liquor ammonii acetatis.

Dose.—Min.xxv. to min.lxxv.

Off. Prep.—*Liquor Ammonii Acetatis.*

LĪQUOR AMMŌNĪI CITRĀTIS. Solution of Citrate of Ammonium. (*Liq. Ammonii Citrat. Fort.* fl.unc.v.; *Aq. Destill.* ad fl.unc. xx.)

Comp.—Citrate of ammonium ($(\text{NH}_4)_3\text{C}_6\text{H}_5\text{O}_7$), dissolved in water.

Prop.—Neutral; not so nauseous as the liquor ammonii acetatis. Sp. gr. 1.062.

Oper.—Diaphoretic, refrigerant.

Use.—In fevers, and when suppuration is threatening, as a drink, or a vehicle for stronger remedies.

Dose.—Fl.dr.ij. to fl.dr.vj.

LĪQUOR AMMŌNĪI CITRĀTIS FORTIOR. Strong Solution of Citrate of Ammonium. (*Acidi Citrici* unc.xij.; *Liquoris Ammoniacæ Fort.* fl.unc.xj. vel q.s.; *Aquæ Destill.* q.s. By neutralising the acid with ammonia and making up to one pint with distilled water. Sp. gr. 1.209.)

Comp.—Citrate of ammonium, $(\text{NH}_4)_3\text{C}_6\text{H}_5\text{O}_7$, with water.

Oper. & Use.—Those of liquor ammonii citratis.

Dose.—Fl.dr.ss. to fl.dr. jss.

Off. Prep.—*Liquor Ammonii Citratis.*

LĪQUOR ANTIMŌNĪI CHLŌRĪDL. Solution of Chloride of Antimony. (*Antimonii Nigri Purif.* lb.j.; *Acidi Hydrochlorici Oiv.*)

Prop.—A heavy liquid of a yellowish-red colour. Sp. gr. 1.47. When dropped into water a white precipitate falls, and from the filtered solution there is a copious deposit on the addition of nitrate of silver. If the white precipitate formed by water be treated with sulphuretted hydrogen, it becomes orange. One fluid drachm mixed with a solution of a quarter of an ounce of tartaric acid in 4 ounces of water gives an orange precipitate when treated with sulphuretted hydrogen, weighing when washed and dried at 212° F. (100°C.) at least 22 grains.

Oper.—Escharotic.

Use.—Externally to carcinomatous growths and poisoned wounds, and bites of serpents.

Off. Prep.—*Antimonii Oxidum*.

LĪQUOR ARSENĪCĀLIS. Arsenical Solution. *Syn.* Liqueur Potassæ Arsenitis; Fowler's Solution. (*Acidi Arseniosi in frustula triti, Potassii Carbonatis*, āā gr.lxxxvij.; *Tinct. Lavand. Co.* fl.dr.v.; *Aq. Destill.* q.s. Heat the acid and carbonate with Oss. of water until they are dissolved. Add the tincture to the cooled liquor, and lastly as much water as may be sufficient, that it may exactly fill a pint measure.) Contains 1 per cent. of arsenious acid.

Comp.—A mixed solution of arsenite and carbonate of potassium dissolved in water; the spirit of lavender gives only colour and taste.

Prop.—A reddish, alkaline liquid, with the odour of lavender. Sp. gr. 1.010. Acidulated with hydrochloric acid, it gives with sulphuretted hydrogen a yellow precipitate. 442 grs. by weight (1 fluid ounce), boiled for 5 minutes with 10 grains of bicarbonate of sodium, and diluted when cold with 6 ounces of water to which a little mucilage of starch has been added, does not give with the volumetric solution of iodine a permanent blue colour until 875 grain-measures have been added, corresponding to 1 per cent., or rather more than 4 grains ($4\frac{1}{3}$), of arsenious acid in a fluid ounce.

Oper.—Tonic, antiperiodic.

Use.—In intermittent fever, in scaly diseases of the skin, neuralgia; in protracted rheumatism, where there is much debility, and the joints much affected. We have given it with decided advantage in threatened apoplexy, after cupping and purging, when the strength is diminished, and the complexion pale.

Dose.—Min.ij. gradually increased to min.viiij. twice a day on a full stomach.

Incomp.—Mineral acids, hydrosulphuric acid, acidulous salts, hydrosulphates and sulphides, salts of calcium, solution of lime, alum, salts of magnesium; salts of iron, silver, and copper; decoction and tincture of cinchona.

LĪQUOR ARSĒŅĪCI HYDROCHLORĪCUS. Hydrochloric Solution of Arsenic. (*Acidi Arsenici in frustula triti* gr.lxxxvij.; *Acidi Hydrochlorici* fl.dr.ij.; *Aquæ Destillatæ* q.s. Boil the arsenious acid with the hydrochloric acid and 4 ounces of water until it is dissolved, then add distilled water to make up the bulk to one pint.) This solution is of the same strength as the liq. arsenicalis.

Prop.—Colourless. Sp. gr. 1.010. Sulphuretted hydrogen causes an orange precipitate; in other respects as liq. arsenicalis.

Use & Dose.—The same as liq. arsenicalis.

LĪQUOR ARSĒŅĪ ET HYDRARGŪRI IŌDĪDI. Solution of Iodide of Arsenium and Mercury. *Syn.* Donovan's Solution. (*Arsenii Iodidi*,

Hydrarg. Iodidi Rubri, āā gr.xlv.; *Aq. Destill.* q.s. Triturate the iodides with an ounce and a half of distilled water, filter, and bring up the volume to 10 fluid ounces by adding distilled water.)

Prop.—Inodorous; taste styptic; colour pale greenish-yellow. Sp. gr. 1·016. One fl.oz. contains about $\frac{1}{100}$ of a molecular weight in grs. (about 1 per cent. by weight) of arsenious iodide, AsI_3 , and of mercuric iodide, HgI_2 . (The original Donovan's solution contained nearly 42 grs. of each iodide in 10 fl.oz.)

Oper.—Tonic, alterative.

Use.—In chronic cutaneous eruptions, especially those of a scaly character.

Dose.—Min.x. to min.xxx. largely diluted thrice a day. Externally fl.dr.j. to fl.unc.j. of distilled water.

LĪQUOR ATRŎPĪNÆ SULPHATIS. Solution of Sulphate of Atropine. (*Atropinæ Sulphatis* gr.ix. ; *Aq. Camph.* fl.dr.xvjss. Dissolve.)

Use.—As a collyrium, supposed to be less irritating than the liquor atropiæ which was formerly official.

LĪQUOR BISMŪTHI ET AMMŎNĪ CITRĀTIS. Solution of Citrate of Bismuth and Ammonium. (800 grains of citrate of bismuth are rubbed into a paste with a little water; solution of ammonia is gradually added with stirring until the salt is just dissolved. Distilled water is then added to form one pint.)

Prop.—Colourless; metallic taste. Sp. gr. 1·07. Neutral or slightly alkaline; mixes with water without change; gives off ammonia, and yields a white precipitate when heated with alkalis. Hydrochloric acid throws down a white precipitate, soluble in excess of the reagent. Two drachms of the solution mixed with an ounce of distilled water, and treated with sulphuretted hydrogen, yields a black precipitate, which washed and dried weighs about 7 grains. One fl.drachm contains the equivalent of 3 grains of oxide of bismuth.

Oper.—Sedative and tonic.

Use.—In pyrosis and gastralgia, and also in cases of irritable bowel.

Dose.—Fl.dr.ss. to fl.dr.j.

Off. Prep.—*Bismuthi et Ammonii Citras.*

LĪQUOR CALCĪI CHLORĪDI. Solution of Chloride of Calcium. (*Calcii Chloridi* gr.lxxxviii.; *Aq. Dest.* fl.unc.j.)

Prop.—Resolvent, stimulant.

Use.—In chronic glandular swellings, to promote absorption. Also used as a test for citric acid and for arseniate of sodium; in the first case it throws down a precipitate from a *hot* solution of citric acid, in the second case a white precipitate, the arseniate of calcium.

Dose.—Min.xv. to min.l. in milk.

LĪQUOR CALCIS. Solution of Lime. *Syn.* Aqua Calcis; Lime-water. (*Calcii Hydratis* unc.ij.; *Aq. Destillatæ* cong.j. Agitate well, and after subsidence draw off clear fluid with a siphon.)

Comp.—Fl.unc.x. are neutralised by 200 grain-measures of the volumetric solution of oxalic acid, corresponding to about 5 grs. of lime, CaO .

Prop.—Inodorous; taste austere, acrid, sweetish; colourless; transparent. Changes vegetable blue colours green. Absorbs carbonic acid, whilst the whole of the lime is rendered insoluble.

Oper.—Antacid, anthelmintic; externally detergent.

Use.—Diarrhœa, diabetes, leucorrhœa; dyspepsia, when there is much

acid or irritability of the stomach; in slimy motions and worms; externally as a lotion to foul and cancerous ulcers; also in tinea capitis and scabies, but with little advantage. Much used to prevent or allay vomiting and diarrhoea in infants.

Dose.—Fl.unc.j. to fl.unc.iv. with milk. When long used in dyspepsia, it should be discontinued at intervals.

Incomp.—Acids, alkaline carbonates, tartar emetic, tartrates and citrates. Infusions of orange-peel, calumba, cinchona, rhubarb, and senna.

Off. Prep.—*Argenti Oxidum. Lin. Calcis. Lotio Hydrargyri Flava. Lotio Hydrargyri Nigra.*

LĪQUOR CALCIS CHLORINĀTÆ. Solution of Chlorinated Lime. (*Calcis Chlorinatæ* lb.j.; *Aquæ Destillatæ* cong.j.) Sp. gr. 1·055.

Oper.—Stimulant, antiseptic, disinfectant.

Use.—As a lotion in foul ulcers, cutaneous diseases, ophthalmia; as an injection in diseases of rectum or vagina, accompanied with fœtid discharges. It is the best antidote in poisoning by sulphuretted hydrogen, sulphhydrate of ammonium, sulphide of potassium and hydrocyanic acid. Used also as a disinfectant.

LĪQUOR CALCIS SACCHARĀTUS. Saccharated Solution of Lime. (*Calcii Hydratis* unc.j.; *Sacchari purificati* unc.ij.; *Aquæ Destillatæ* Oj.)

Prop.—Sp. gr. 1·052. 460·2 grains by weight (1 fl.oz.) require for neutralisation 254 grain-measures of the volumetric solution of oxalic acid, corresponding to 7·11 gr. of lime, CaO.

Oper.—Antacid, sedative.

Use.—In irritable states of the stomach, and as liquor calcis.

Dose.—Min.xv. to fl.dr.j., being twelve times the strength of liquor calcis.

LĪQUOR CHLŌRĪ. Solution of Chlorine. (*Acidi Hydrochlorici* fl.unc.vj.; *Manganesi Oxidi Nigri contriti* unc.j.; *Aquæ Destillatæ* fl.unc.xxxiv. Mix the acid and oxide of manganese in the retort; then pass chlorine into the water, until it ceases to come off.)

Prop.—A yellowish-green liquid, with the odour of chlorine, decolorising the solution of sulphate of indigo. Sp. gr. 1·003. Leaves no residue on evaporation. When 20 grs. of iodide of potassium dissolved in an ounce of distilled water are added to 439 grains by weight (1 fluid ounce) of this preparation, the mixed solution acquires a deep-red colour, requiring for its discharge 750 grain-measures of the volumetric solution of hyposulphite of sodium, corresponding to 2·66 grains of chlorine.

Use.—As a test for the salts of morphine; as a gargle or lotion, diluted in the proportion of one part to seven of water; also more diluted, internally in typhus fever.

LĪQUOR EPISPASTĪCUS. Blistering Liquid. *Syn.* Linimentum Cantharidis. (*Cantharidis* unc.v.; *Ætheris Acet.* q.s. Prepared by macerating the cantharides with 3 fl.oz. of acetic ether, then percolating to produce 20 fl.oz.)

Oper.—Rubefacient, vesicant.

Use.—In all cases where blisters are required. It is very manageable, and can be applied with a brush.

LĪQUOR FERRI ACETATIS. Solution of Acetate of Iron. (*Liquoris Ferri Acetatis Fort.* fl.unc.v.; *Aquæ Destill.* ad fl.unc.xx.)

Comp.—Acetate of iron and water; the same strength as the tincture.

Oper.—Tonic, hæmatinic.

Use.—Similar to other iron preparations.

Dose.—Min.v. to min.xxx.

LIQUOR FERRI ACETATIS FORTIOR. Strong Solution of Acetate of Iron. (*Liquoris Ferri Persulphatis* fl.unc.v.; *Liq. Ammoniac* q.s.; *Acidi Acet. Glac.* fl.unc.iiij.; *Aq. Destill.* q.s. Ferric hydrate is precipitated by ammonia, then dissolved in glacial acetic acid, and the solution made up to ten fluid ounces by addition of distilled water.)

Oper.—Tonic, hæmatinic.

Use.—Similar to that of other iron preparations.

Dose.—Min.j. to min.viii.

Off. Prep.—*Liquor Ferri Acetatis. Tinctura Ferri Acetatis.*

LIQUOR FERRI DIALYSATUS. Solution of Dialysed Iron. (*Liq. Ferri Perchlor. Fort.* fl.unc.vij.; *Liq. Ammoniac, Aq. Destill.*, aa q.s. Ferric hydrate is precipitated by the ammonia, and with an ounce of perchloride it is placed in a covered dialyser.)

Comp.—A solution of highly basic ferric oxychloride, or chloroxide of iron, from which most of the acidulous matter has been removed by dialysis.

Prop.—Clear, dark, reddish-brown liquid; sp. gr. 1.047; neutral; free from marked ferruginous taste.

Oper.—Hæmatinic.

Use.—In anæmia, chlorosis; whenever the tonic effect of iron is desired without astringent action.

Dose.—Min.x. to min.xxx.

LIQUOR FERRI PERCHLORIDI. Solution of Perchloride of Iron. (*Liquoris Ferri Perchloridi Fortioris* fl.unc.v.; *Aq. Destillatæ* ad fl.unc.xx. Mix. Sp. gr. 1.11.)

Oper.—Astringent and tonic; diuretic.

Use.—Vide *Tinctura Ferri Perchloridi.*

Dose.—Min.x. to min.xxx.

LIQUOR FERRI PERCHLORIDI FORTIOR. Strong Solution of Perchloride of Iron. (Prepared by dissolving iron in hydrochloric acid, and afterwards by evaporating the solution with nitric acid; the peroxide of iron is formed and converted into the perchloride.)

Comp.—Perchloride of iron Fe_2Cl_6 dissolved in water.

Prop.—Orange-brown colour; strong styptic taste; sp. gr. 1.42: nitrate of silver throws down a white, ferrocyanide of potassium a blue, precipitate.

Oper.—Tonic, diuretic, styptic.

Use.—Chiefly to make the liquor ferri perchloridi and the tinctura ferri perchloridi, and seldom alone.

Dose.—Min.iiij. to min.x.

Incomp.—Alkalis, solution of lime, magnesia, and carbonates of alkalis, calcium, and magnesium; astringent vegetable infusions and decoctions, mucilage.

Off. Prep.—*Liq. Ferri Dialysatus. Liq. Ferri Perchlor. Tinct. Ferri Perchlor.*

LIQUOR FERRI PERNITRATIS. Solution of the Pernitrate of Iron. (*Ferri* unc.j.; *Acidi Nitrici* fl.unc.ivss.; *Aq. Destill.* q.s. Introduce the iron into the acid mixed with water, and leave them

until the metal is dissolved. Filter, and add distilled water to produce one pint and a half.)

Comp.—Pernitrate of iron $\text{Fe}_2(\text{NO}_3)_6$, dissolved in water.

Prop.—Transparent; fine orange colour; weak nitric acid odour; acid styptic taste; sp. gr. 1.107. The ferrocyanide, but not the ferricyanide, of potassium throws down a blue precipitate. One fl.dr. treated with excess of solution of ammonia gives a precipitate, which, when washed, dried, and incinerated, weighs 2.6 grains.

Oper.—Astringent, tonic.

Use.—In colliquative diarrhœa, leucorrhœa.

Dose.—Min.x. to min.xl.

Incomp.—All astringent vegetable infusions, decoctions, or syrups.

LĪQUOR FERRI PERSULPHATIS. Solution of Persulphate of Iron. (Prepared by action of nitric acid on the solution of sulphate of iron.)

Prop.—Dark red coloured liquid; inodorous, astringent; miscible in all proportions with water and alcohol. Diluted with 10 volumes of water it gives a white precipitate with chloride of barium, and a blue precipitate with the yellow but not with the red prussiate of potassium. Sp. gr. 1.441. 1 fl.dr. diluted with 2 ounces of distilled water gives, with excess of ammonia, a precipitate, which, when washed and incinerated, weighs 11.44 grains.

Use.—Chiefly to make the following preparations: Ferri et Ammonii Citras, Ferri et Quininæ Citras, Ferri Peroxidum Humidum, Ferrum Tartaratum, Liquor Ferri Acetatis Fortior.

LĪQUOR GUTTA PERCHA. Solution of Gutta Percha. (Dissolve one ounce of gutta percha in six ounces of chloroform, then add an ounce of carbonate of lead—merely a mechanical purifier—previously mixed with two ounces of chloroform, and, having shaken the whole together, let it remain at rest till the insoluble matter has subsided; lastly, decant the clear liquid, and keep it in a well-stoppered bottle.)

Use.—For making the *Charta Sinapis*.

LĪQUOR HYDRARGYRI NITRATIS ACĪDUS. Acid Solution of Nitrate of Mercury. (*Hydrargyri* unc.iv.; *Acidi Nitrici* fl.unc.v.; *Aque Destillatæ* fl.unc.jss.)

Comp.—Nitrate of mercury $\text{Hg}(\text{NO}_3)_2$ dissolved in nitric acid.

Prop.—Colourless; sp. gr. 2.0; acid. A solution of potash in excess throws down a yellow precipitate.

Oper.—Escharotic.

Use.—As an application to malignant ulcers, as carcinoma, lupus, &c.; also to ulcers of the cervix uteri. It is much used on the Continent. Applied by means of a brush.

LĪQUOR HYDRARGYRI PERCHLORĪDI. Solution of Perchloride of Mercury. (*Hydrarg. Perchloridi*, *Ammonii Chloridi*, āā gr.x.; *Aq. Destill.* Oj. Dissolve in water.)

Oper. & Uses.—See *Hydrargyri Perchloridum*.

Dose.—Fl.dr.ss. to fl.dr.ij. in any mucilage; or in syrup and water.

Incomp.—Alkalies and their carbonates, solution of lime, tartar emetic, nitrate of silver, acetates of lead, sulphides, soaps, infusions and decoctions of astringent vegetables.

LĪQUOR IŌDI. Solution of Iodine. (*Iodi* gr.xxij.; *Potassii Iodidi* gr.xxxiiij.; *Aque Destillatæ* fl.unc.j. Dissolve.)

Oper.—Alterative, resolvent, rubefacient.

Use.—As an external application in cases requiring the action of iodine.

LĪQUOR LITHIÆ EFFERVESCENS. Effervescing Solution of Lithia.

Syn. Aqua Lithiæ Effervescens; Lithia Water. (*Lithii Carbonatis* gr.x.; *Aquæ* Oj. Mix in a suitable apparatus, and pass into it carbonic acid, obtained from the action of sulphuric acid on chalk. Preserve in well-corked bottles.)

Prop.—Clear, sparkling, effervescing, with an agreeable acidulous taste. Half a pint evaporated to dryness yields 5 grains of a white solid residue, answering to the tests for carbonate of lithium.

Oper.—Antacid, diuretic.

Use.—In gout and rheumatism.

Dose.—Fl.unc.v. to fl.unc.x.

LĪQUOR MAGNESII CARBONĀTIS. Solution of Carbonate of Magnesium. (Prepared by mixing solutions of sulphate of magnesium and carbonate of sodium. Collect and wash the precipitate of carbonate of magnesium, and, having added distilled water, pass into it carbonic acid gas. Keep in a well-corked bottle.) An ounce of the solution contains 10 grs. of carbonate of magnesium.

Prop.—Slightly effervescent; clear and free from bitterness. An ounce evaporated to dryness yields a white solid residue, which, after being calcined, weighs about 4 grs. This residue is insoluble in water, and answers to the tests for magnesia.

Dose.—Fl.unc.j. to fl.unc.ij.

LĪQUOR MAGNESII CITRĀTIS. Solution of Citrate of Magnesium. (*Magnesi Carbonatis* gr.c.; *Acidi Citrici* gr.cc.; *Syrupi Limonis* fl.unc.ss.; *Potassii Bicarbonatis crystallorum* gr.xl.; *Aquæ Destillatæ* q.s. Dissolve the acid in two ounces of water, and, having added the carbonate of magnesium, stir until it is dissolved. Filter the solution into a strong half-pint bottle; then, having introduced the bicarbonate, immediately close the bottle with a wired cork; afterwards shake the bottle till the bicarbonate is dissolved.)

Oper.—Antacid and aperient.

Use.—In all cases requiring a mild saline aperient.

Dose.—Fl.unc.v. to fl.unc.x.

LĪQUOR MORPHINÆ ACETĀTIS. Solution of Acetate of Morphine.

(*Morphinæ Acetatis* gr.ix.; *Acidi Acetici Dil.* min.xviii.; *Spiritus Rectificati* fl.unc.ss.; *Aq. Destill.* fl.unc.jss. Mix acid, spirit, and water, and dissolve the acetate of morphine in the meantime.) Contains 1 per cent. of the acetate.

Oper.—Narcotic, anodyne, sedative.

Use.—Vide *Morphinæ Acetas*.

Dose.—Min.x. to fl.dr.j.

LĪQUOR MORPHINÆ BIMĒCŌNATIS. Solution of Bimeconate of Morphine.

(*Morphinæ Hydrochloratis* gr.ix.; *Liq. Ammoniac* q.s.; *Acidi Meconici* gr.vj.; *Spirit. Rectif.* fl.unc.ss.; *Aq. Destill.* q.s. Morphine is precipitated with ammonia, and, after washing and drying, it is dissolved in rectified spirit and meconic acid.)

Comp.—Bimeconate of morphine ($C_{17}H_{19}NO_3, C_7H_4O_7$) $1\frac{1}{2}$ per cent. (Of about the same strength as tincture of opium.)

Prop.—Colourless, or nearly so, giving white precipitate with potash, red coloration with nitric acid or neutral solution of perchloride of iron.

Oper.—Sedative.

Use.—As opium, or other preparations of morphine.

Dose.—Min.v. to min.xl.

LÍQUOR MORPHINÆ HYDROCHLŌRĀTIS. Solution of Hydrochlorate of Morphine. (*Morphinæ Hydrochloratis* gr.ix.; *Acidī Hydrochlorici* Dil. min.xviiij.; *Spiritus Rectificati* fl.unc.ss.; *Aquæ Destillatæ* fl.unc.jss. Mix and dissolve.) Contains 1 per cent. of hydrochlorate of morphine.

Oper. & Use.—See *Morphinæ Hydrochloras*.

Dose.—Min.x. to min.xl.

LÍQUOR PLUMBI SUBACETĀTIS. Solution of Subacetate of Lead. (*Plumbi Acetatis* unc.v.; *Plumbi Oxidi in pulv. triti* unc.iiijss.; *Aquæ Destillatæ* Oj. vel q.s. Boil for half an hour, occasionally stirring, and when the solution cools make up the quantity to unc.xx.; strain.

Comp.—It is an aqueous solution of the subacetate of lead, $Pb_2O(C_2H_3O_2)_2$.

Prop.—Colourless; limpid; sp. gr. 1.275; odour acetous; taste astringent, sweetish with alkaline reaction; becoming turbid on exposure to the air, and forming with mucilage of acacia an opaque white jelly. Sulphuric acid in excess gives a white precipitate, acetic acid being set free. 284.5 grs. by weight require for perfect precipitation 500 grain-measures of the volumetric solution of oxalic acid, corresponding to 24 per cent. of subacetate of lead.

Oper.—Externally when diluted, cooling, astringent, sedative.

Use.—Diluted with forty times its quantity of distilled water, it is a useful application in phlegmonous inflammations and burns; and still more diluted, it forms a good collyrium, and a wash for the mouth in salivation.

Incomp.—Mucilaginous solutions or decoctions; common pump-water.

Off. Prep.—*Liq. Plumbi Subacetatis Dilutus*.

LÍQUOR PLUMBI SUBACETĀTIS DILŪTUS. Diluted Solution of Subacetate of Lead. (*Liq. Plumbi Subacetatis* fl.dr.ij.; *Spiritus Rectificati* fl.dr.ij.; *Aquæ Destillatæ* fl.unc.xixss. Mix and filter through paper. Keep the clear solution in a stoppered bottle.)

Use.—See *Liquor Plumbi Subacetatis*.

LÍQUOR POTASSÆ. Solution of Potash. (*Potassii Carbonatis* lb.j.; *Calcii Hydratis* unc.xij.; *Aquæ Dest.* cong.j. Dissolve the carbonate of potassium in the water, boil and add the lime. Mix the whole; set the mixture aside in a covered vessel, and when it is cold and clear from the subsidence of the insoluble matter, decant, and keep the decanted fluid in well-stoppered phials of green glass.

Comp.—Hydrate of potassium (KHO) and water.

Prop.—Inodorous; taste caustic, alkaline; colourless; appearance oily when shaken; more dense than water; feels soapy between the fingers, owing to the solution of the cuticle; will not effervesce with acids; sp. gr. 1.058; 462.9 grains by weight (1 fluid ounce) require for neutralisation 482 grain-measures of the volumetric solution of oxalic acid, corresponding to 5.84 per cent. by weight of hydrate of potassium, KHO. It gives very slight, if any, precipitate with solution of lime, nor, after saturation with nitric acid, with chloride of barium or nitrate of silver. One ounce contains 27 grains of hydrate of potassium.

Oper.—Lithontriptic in some cases; antacid; diuretic; seems to favour tissue changes; externally escharotic, stimulant.

Use.—The reputation of a'ka'is in calculus is not so high as formerly; potash acts on uric acid calculi, and therefore may be useful in nephritic calculus; but its chief use is in preventing the formation of uric acid. It neutralises acids in the stomach, and allays irritability in that organ; it is useful in cases of boils, lepra vulgaris, psoriasis, and some other cutaneous complaints. It has also been recommended in ovarian disease. Externally diluted, as a lotion in rachitis and gouty swellings.

Dose.—Min.xv. to fl.dr.j. in chicken broth or beer, three or four times a day. When used to counteract acidity, a bitter should be given with it.

Incomp.—Acids, metallic salts, carbonate, acetate, and hydrochlorate of ammonium, subchloride and perchloride of mercury.

LĪQUOR POTASSÆ EFFERVESCENS. Effervescing Solution of Potash. *Syn.* Aqua Potassæ Effervescens; Potash Water. (*Potassii Bicarbonatis* gr.xxx.; *Aquæ* Oj. Pass into the filtered solution of the bicarbonate a stream of carbonic acid gas. Keep the solution closely corked.)

Prop.—It is clear, sparkling, effervescing, with agreeable acidulous taste. 10 ounces, after being boiled five minutes, require for neutralisation 150 grain-measures of the volumetric solution of oxalic acid. 5 ounces evaporated to $\frac{1}{5}$ th with 12 grs. of tartaric acid, yield a crystalline precipitate, which, when dried, weighs not less than 12 grs.

Oper.—Antacid, diuretic, refrigerant.

Use.—In gouty dyspepsia.

Dose.—Fl.unc.ij. to fl.unc.iv.

LĪQUOR POTASSII PERMANGĀNĀTIS. Solution of Permanganate of Potassium. (88 grains of permanganate of potassium dissolved in Oj. of distilled water. A form of Condry's solution.)

Oper.—Antiseptic.

Use.—As a lotion or a gargle in cases of sloughing ulcers in mouth or elsewhere, and as a remedy in diabetes.

Dose.—Fl.dr.ij. to fl.dr.iv. As a lotion or gargle min.xv. to min.xxx. in two or three tablespoonfuls of water. It must be mixed fresh whenever required.

LĪQUOR SODÆ. Solution of Soda. (*Sodii Carbonatis* unc.xxviiij.; *Calci Hydratis* unc.xij.; *Aquæ Destill. ferventis* cong.j.) Prepared in same way as the Liquor Potassæ.

Prop.—Specific gravity 1.047. An ounce contains 18.8 grs. of hydrate of sodium. 458 grs. by weight (1 fl. oz.) require for neutralisation 470 grain-measures of volumetric solution of oxalic acid, corresponding to 4.1 per cent. of hydrate of sodium NaHO. Does not effervesce when added to an excess of dilute hydrochloric acid; mixed with an equal volume of distilled water it gives no precipitate with liquor calcis or oxalate of ammonium. Treated with diluted nitric acid in excess and evaporated to dryness, the residue forms with water a clear solution, only slightly precipitated by chloride of barium and nitrate of silver, and not at all by ammonia.

Oper.—Antacid.

Use.—Used in the preparation of valerianate of sodium.

LĪQUOR SODÆ CHLORINĀTÆ. Solution of Chlorinated Soda. (*Sodii Carbonatis* unc.xxiv.; *Calci Chlorinatæ* unc.xvj.; *Aquæ Destillatæ* cong.j. Dissolve the carbonate in two pints of water;

triturate the lime with six pints of water and filter; mix the solutions and filter again.)

Prop.—Colourless, alkaline, taste sharp, astringent, brackish, evolves chlorine when exposed to the air; bleaches the solution of indigo. The colour of turmeric is at first changed to brown, and soon after destroyed. Sp. gr. 1.054. It is only slightly precipitated by oxalate of ammonium.

Comp.—Hypochlorite of sodium, bicarbonate of sodium, and chloride of sodium.

Oper.—Astringent, antiseptic.

Use.—In typhus, in other low fevers, largely diluted; to destroy fœtor, and tendency to putrefaction in the bowels. A disinfecting agent.

Dose.—Min.x. to min.xx.

Off. Prep.—*Cataplasma Sodæ Chlorinatæ*,

LĪQUOR SODÆ EFFERVESCENS. Effervescing Solution of Soda.

Syn. Aqua Sodæ Effervescens; Soda Water. (Prepared as the *Liquor Potassæ Effervescens*.)

Prop.—Clear, sparkling, with an agreeable acidulous taste; strongly effervescent. 10 ounces, after being boiled for five minutes, require for neutralisation 178 grain-measures of the volumetric solution of oxalic acid.

Oper.—Antacid, diuretic.

Use.—In dyspepsia, acidity of stomach.

Dose.—Fl.unc.ij. to fl.unc.iv.

LĪQUOR SODII ARSENIĀTIS. Solution of Arseniate of Sodium.

(9 grains of arseniate of sodium, rendered anhydrous by heat, not exceeding 300° F. (148°·9 C.), dissolved in 2 fl. oz. of distilled water.) Contains 1 per cent.

Oper.—A mild preparation of arsenic. (See *Liquor Arsenicalis*.)

Dose.—Min.v. to min.x.

LĪQUOR SODII ETHYLĀTIS. Solution of Ethylate of Sodium.

(*Sodii* gr.xxij.; *Alcohol Ethylici* fl.unc.j. Dissolve the metallic sodium in the ethylic alcohol, keeping the flask cool in a stream of cold water.)

Comp.—Ethylate of sodium, $\text{NaC}_2\text{H}_5\text{O}$, about 19 per cent.

Prop.—Colourless, syrupy, becoming brown by keeping.

Oper.—Caustic.

Use.—In local treatment of nævi, being applied by means of a pointed glass rod.

LĪQUOR STRYCHNINÆ HYDROCHLORATIS. Solution of Hydro-

chlorate of Strychnine. *Syn.* Liquor Strychniæ. (*Strychninæ* gr.ix.; *Acidi Hydrochlor.* Dil. min.xiv.; *Spir. Rect.* fl.unc.ss.; *Aquæ Destill.* fl.unc.jss.) Contains about 1 per cent.

Oper.—Spinal excitant; tonic.

Use.—In dyspepsia; local paralysis, especially when arising from lead.

Dose.—Min.v. to min.x.

LĪQUOR ZINCI CHLORĪDI. Solution of Chloride of Zinc. (*Zinci*

Granulati lb.j.; *Acidi Hydrochlor.* fl.unc.xliv.; *Liq. Chlori* q.s.; *Zinci Carbonat.* unc.ss. vel q.s.; *Aquæ Destill.* Oj.) Chlorine and carbonate of zinc are employed, if necessary, to remove traces of iron or lead.

Comp.— ZnCl_2 , in solution.

Prop.—Colourless, astringent, sweet. Sp.gr. 1.460.

Oper.—Antiseptic, caustic.

Use.—In local treatment of carcinoma, and for nævi. Also as antiseptic in surgical operations.

LITHARGYRUM. Litharge. (See *Plumbi Oxidum*.)

LITHII CARBONAS. Carbonate of Lithium. (Chemical formula, Li_2CO_3 .)

Prop.—In white powder, or in minute white crystalline grains, reaction alkaline, soluble in 150 parts of water, but not in alcohol. Soluble with effervescence in hydrochloric acid; the solution evaporated leaves the chloride of lithium, which communicates a red colour to the flame of a spirit lamp, and re-dissolved yields a precipitate with phosphate of sodium. 10 grains of the salt neutralised with sulphuric acid, and afterwards heated to redness, leave 14.86 grains of dry sulphate of lithium, which, when re-dissolved, gives no precipitate with oxalate of ammonium or solution of lime.

Oper.—Diuretic, with a tendency to render urine alkaline.

Use.—In gout, and especially in those cases in which the urates are deposited in the joints.

Dose.—Gr. iij. to gr. vj. in aerated water; dilution aids its action.

Off. Prep.—*Liquor Lithiæ Effervescens. Lithii Citras.*

LITHII CITRAS. Citrate of Lithium. (*Lithii Carbonatis* gr. l.; *Acidi Citrici* crystall. gr. xc.; *Aquæ Destillatæ calidæ* fl. unc. j. The carbonate is decomposed, and the citrate evaporated and powdered.)

Comp.— $\text{Li}_2\text{C}_6\text{H}_5\text{O}_7 \cdot 4\text{H}_2\text{O}$.

Prop.—White crystalline salt, soluble in water.

Oper.—Diuretic, with a tendency to render the urine alkaline.

Dose.—Gr. v. to gr. x.

LITMUS. (Appendix, B.P.) Litmus or Archil. (*Rocellatinctoria Cryptogamia. N.O. Lichenes. Azores. 24*)

Prop.—Inodorous; taste saltish; and when chewed subacid.

Use.—Colour blue or violet. As a test of great delicacy for acids. To prepare it, the plant is reduced to powder; some of the soda of commerce is then added to it; and it is repeatedly moistened with urine till it ferments, and gradually acquires a violet colour; it is then dried. The watery infusion of it, or paper stained with it, shows the presence of an otherwise imperceptible portion of acid in any fluid by acquiring a red colour.

LITMUS PAPER, BLUE. (Appendix, B.P.) Unsized white paper steeped in solution of litmus and dried.

Use.—A test for the detection of free acid.

LITMUS PAPER, RED. (Appendix, B.P.) Unsized white paper steeped in solution of litmus previously reddened by a minute quantity of acid.

Use.—A test for the detection of free alkali.

LOBELIA. Lobelia. The flowering plant dried. (*Lobelia inflata. N.O. Lobeliaceæ. United States of America. 24*)

Prop.—Odour faint but irritating. Taste acid. Imported in compressed, oblong, rectangular packages. Separate pieces of varying length, yellowish green, angular, and bearing sessile or stalked hairy leaves, irregularly toothed, together with some flowers and fruits. Yields its properties to water, alcohol, and ether. Contains lobelic acid and *lobeline*.

Oper.—Emetic, sedative, purgative, expectorant, antispasmodic.

Use.—In the paroxysm of asthma; in certain cases of bronchitis, in croup, whooping cough.

Off. Prep.—*Tinctura Lobeliae. Tinctura Lobeliae Ætherea.*

LOTIO HYDRARGYRI FLAVA. Yellow Mercurial Lotion. Yellow Wash. (*Hydrargyri Perchloridi* gr.xviii.; *Liq. Calcis* fl.unc.x. Mix.)

Oper.—Alterative, resolvent.

Use.—In syphilitic ulceration.

LOTIO HYDRARGYRI NIGRA. Black Mercurial Lotion. Black Wash. (*Hydrargyri Subchloridi* gr.xxx.; *Liq. Calcis* fl.unc.x. Mix.)

Oper.—Stimulant, alterative, resolvent.

Use.—In syphilitic and certain forms of cachectic ulceration.

LŪPŪLĪNUM. Lupulin. *Syn.* Lupulinic Glands. Glandular powder from the dried strobiles of *Humulus Lupulus*.

Prop.—Bright yellow granular powder consisting of minute shining glands. Not more than 30 to 40 per cent. should be insoluble in ether.

Oper.—Tonic, sedative.

Use.—In sleeplessness, and in alcoholism. Also occasionally as tonic in convalescence.

Dose.—Gr.ij. to gr.v. in pill.

LŪPŪLUS. Hop. The dried strobiles of the female plant. (*Humulus Lupulus. N.O. Urticaceae. Indigenus. ♀*)

Prop.—Odour fragrant, sub-narcotic; taste bitter, aromatic; depending on a peculiar principle named *lupulin*, extractive, and essential oil; extracted equally by water and spirit from the dried strobiles. Strobiles of a greenish-yellow colour, with minute yellow grains (*Lupulin*) adherent to the base of the scales.

Oper.—Narcotic, anodyne, diuretic.

Use.—In gout and rheumatism; under the form of infusion in the proportion of unc.ss. to Oj. of boiling water; but the extract already noticed is preferable. The powder, formed into an ointment with lard, is said to ease the pain of open cancer. A pillow, stuffed with hops, is an old mode of procuring sleep in the watchfulness of delirious fever. Its powers have been overrated.

Off. Prep.—*Ext. Lupuli. Infusum Lupuli. Tinct. Lupuli.*

MAGNĒSĪA LEVIS. Light Magnesia. *Syn.* Light Calcined Magnesia. (Made like heavy magnesia, but from the light carbonate. Differs only from heavy magnesia in being $3\frac{1}{2}$ times lighter.)

Dose.—Gr.x. to gr.lx.

Off. Prep.—*Pulv. Rhei Compositus.*

MAGNĒSĪA PONDERŌSA. Heavy Magnesia. *Syn.* Heavy Calcined Magnesia. (Obtained from heavy carbonate of magnesium by exposure to a strong heat.)

Comp.—*MgO.*

Prop.—Inodorous; taste very slightly bitter; in the form of a powder, white, light, spongy, soft; insoluble in water, readily dissolved by acids without effervescence. The solution in hydrochloric acid, when neutralised by ammonia and chloride of ammonium, gives a copious white precipitate with phosphate of sodium. Dissolved in nitric acid and neutralised with the same reagents, it gives no precipitate with oxalate of ammonium or chloride of barium.

Oper.—Antacid, laxative when it meets with acids in the stomach.

Use.—In heartburn, aphthæ, pyrosis, and dyspepsia depending on acidities; preferable to chalk when the bowels are costive. Sometimes it is given in dysentery, combined with ipecacuanha and opium, and followed by successive draughts of lemonade.

Dose.—Gr.x. to gr.lx. occasionally in water or milk.

Incomp.—Acids, metallic salts, hydrochlorate of ammonium.

MAGNĒSII CARBONAS PONDEROSA ET LEVIS. Heavy and Light Carbonate of Magnesium. (*Magnesi Sulphatis* unc.x.; *Sodii Carbonatis* unc.xij.; *Aquæ Destillatæ ferventis* q.s. Dissolve the salts separately, mix the solutions, and a double decomposition takes place. In preparing the heavy carbonate, the salts are both dissolved in a pint of boiling water. For the light, half a gallon of water is employed, the solutions are mixed when cold, and the mixture is subsequently boiled.

Comp.—Mixture of carbonate with hydrate. $(\text{MgCO}_3)_3, \text{Mg}(\text{HO})_2, 4\text{H}_2\text{O}$.

Oper.—Antacid, laxative when it meets with acid.

Use.—The same as that of magnesia; but, owing to the carbonic acid, it sometimes occasions unpleasant distension.

Dose.—Gr.x. to gr.xx. as an antacid; gr.xx. to gr.lx. as a purgative.

Off. Prep.—*Liq. Magnesi Carbonatis*. *Magnesia*. *Trochisci Bismuthi*.

The light carbonate is employed in the preparation of *Vapor Olei Pini Sylvestris*.

MAGNĒSII SULPHAS. Sulphate of Magnesium. (Obtained from magnesian limestone (dolomite) by means of sulphuric acid, which unites with the magnesia, and remains in solution.)

Comp.— $\text{MgSO}_4, 7\text{H}_2\text{O}$.

Prop.—Taste bitter, disagreeable; in rhombic crystals, which occasionally, owing to an admixture of hydrochlorate of magnesium, deliquesce; the pure sulphate effloresces; readily soluble in water. Emits no hydrochloric acid on the addition of sulphuric acid. An aqueous solution gives copious white precipitates with chloride of barium, and with a mixed solution of ammonia, chloride of ammonium, and phosphate of sodium. The precipitate by carbonate of sodium, obtained from a boiling solution of 100 grs. of the salt, should, when well washed, dried, and heated to redness, weigh 16.26 grains.

Oper.—Purgative, antiphlogistic.

Use.—In all cases which require purgatives. It operates without griping, and, when united with acidulated infusion of roses, will sit on the stomach when all other things are rejected. The less it is diluted, if a draught of warm water be taken an hour afterwards, the better and more easily it operates. An adjunct to clysters.

Dose.—Gr.lx. to unc.ss. In clysters unc.jss. to unc.iiij.

Incomp.—The fixed alkalis and their carbonates, solution of lime, chloride of barium, nitrate of silver, acetates of lead.

Off. Prep.—*Enema Magnesi Sulphatis*. *Mistura Sennæ Composita*.

MANGANESII OXIDUM NIGRUM. Black Oxide of Manganese.

Comp.— MnO_2 .

Prop.—A heavy black powder; when exposed to great heat, it affords abundance of oxygen gas; when dissolved in hydrochloric acid, chlorine gas is evolved.

Use.—In pharmaceutical operations; for making permanganate of potassium and chlorine water; for procuring oxygen and chlorine

gas; and for fumigation in cases of infection. (*Sodii Chloridi* unc.j.; *Manganesii Oxidi Nigri* unc.j.; *Acidi Sulphurici* fl.unc.j.; *Aquæ* fl.unc.ij. Mix the acid and water, and pour the mixture over the other ingredients, in a china basin. placed in a pipkin of hot sand.) The doors and windows of the room under fumigation must be closely shut for an hour or two, then thrown open, and a current of air allowed to pass through the room.

MANNA. *Manna.* (*Fraxinus Ornus.* N.O. *Oleaceæ.* Sicily and Calabria. I^2 Obtained by spontaneous exudation and incisions.)

Comp.—Saccharine matter, mannite $\text{C}_6\text{H}_8(\text{OH})_6$, nauseous extractive, mucilage.

Prop.—Inodorous; sweetish, with a very slight degree of bitterness; in friable flakes of a whitish or pale yellow colour, opaque; soluble in water and alcohol.

Oper.—Laxative; apt to gripe.

Use.—As a purgative for children, who readily take it on account of its sweetness; but more generally it is used as an adjunct to other purgatives. Not much used.

Dose.—Gr.℥x. to unc.ss. for children, and unc.ss. to unc.j. for adults, alone, or dissolved in fluid purgatives.

MARMOR ALBUM. White Marble. Hard, white, crystalline native carbonate of calcium, in masses. CaCO_3 .

Prop.—Colour, various shades of white; internal lustre vitreous; fracture foliated; brittle.

Use.—For preparing quicklime and carbonic acid gas.

MASTICHE. Mastich. Concrete resinous exudation. (*Pistacia Lentiscus.* N.O. *Anacardiaceæ.* Turkey and the Levant. I^2)

Comp.—Resin, essential oil, and a matter resembling caoutchouc.

Prop.—Odour agreeable when heated; almost insipid; in globular, irregular, yellowish, semi-transparent masses: soluble in ether, partially in alcohol.

Oper.—Stimulant, sialagogue? astringent, diuretic.

Use.—In old obstinate coughs; gleet, and chewed in paralysis of the tongue; but rarely used except in dental surgery to fill carious teeth, and to aid in the formation of pills.

MATICÆ FOLIÆ. Matico Leaves, dried. (*Artanthe elongata* or *Piper angustifolium.* N.O. *Piperaceæ.* Peru. I^2)

Prop.—Leaves from 4 to 8 inches long, veined and tessellated on the upper surface, downy and reticulated beneath; commonly in commerce the leaves are broken and compressed; taste aromatic, scarcely astringent; odour aromatic; active bitter principle soluble in water and alcohol.

Comp.—Tannic acid, artanthic acid, aromatic volatile oil.

Oper.—Styptic and astringent.

Use.—Hæmorrhage, especially externally; vesical catarrh.

Dose.—Of the infusion fl.unc.j. to fl.unc.ij. To arrest hæmorrhage the under side of the leaf is applied; the action appears to be mainly, if not entirely, due to the physical characters of the leaves.

Off. Prep.—*Infusum Maticæ.*

Incomp.—Mineral acids and alkalis, persalts of iron; acetate of lead; tincture or infusion of galls.

MEL. Honey. (Collected from flowers by the *Apis mellifica.* Class *Insecta*, Order *Hymenopterc.*)

Comp.—Saccharine matter, chiefly grape sugar; mucilage; some acid, occasionally essential oil; varying according to the kinds of plants used by the bee.

Prop.—Odour peculiar; taste sweet and slightly acrid; the best is limpid, containing small concretions; nearly colourless; and tenacious. Boiled with water for five minutes and allowed to cool, it gives no blue tint on the addition of solution of iodine.

Oper.—Aperient, externally detergent; stimulant.

Use.—Seldom used internally as a medicine, but when freely eaten it is apt to produce colic; externally as an adjunct to gargles in cynanche tonsillaris; in aphthæ; sometimes applied to foul ulcers.

Off. Prep.—*Mel Depuratum*.

MEL BORĀCIS. Borax Honey. (*Boracis contritæ* gr.lx.; *Mellis Depurati* gr.cccclxxx.; *Glycerini* gr.xxx.)

Oper.—Detergent.

Use.—Applied to the tongue and insides of the cheeks, in aphthous affections, and in pytalism.

MEL DEPŪRĀTUM. Clarified Honey. (Melt the honey in a water-bath, and strain, while hot, through flannel previously moistened with warm water.)

Prop.—Limpid; so consistent that, when divided with the edge of the spoon, it does not again instantly unite.

Use.—The same as that of honey; for pharmaceutical purposes.

Off. Prep.—*Confectio Piperis*. *Confectio Scammonii*. *Confectio Terebinthinæ*. *Mel Boracis*. *Oxymel*. *Oxymel Scillæ*.

MENTHÆ PIPERITÆ OLEUM. See *Oleum Menthæ Piperitæ*.

MENTHOL. Menthol. $C_{10}H_{20}O$. Stearoptene from the oil of the fresh herb. (*Mentha arvensis*, vars. *piperascens* et *glabrata*; and *Mentha piperita*. N.O. *Labiata*.)

Prop.—Colourless acicular crystals; odour and flavour of peppermint. Sparingly soluble in water, readily in rectified spirit. Boiled with equal parts of sulphuric acid and water, the menthol becomes blue, the acid brown. Entirely dissipated by heat.

Oper.—Antiseptic, anæsthetic.

Use.—As local anodyne in neuralgia and rheumatism; as parasiticide in skin diseases. Occasionally employed internally in neuralgia.

Dose.—Gr.ss. to gr.ij., in pill.

MEZĒRĒI CORTEX. Mezereon Bark, dried. (*Daphne Mezereum*, or *Daphne Laureola*. Spurge Laurel. N.O. *Thymelacæ*. North of Europe. $\frac{1}{2}$)

Comp.—Daphnin, oleo-resin, wax, extractive, gum, sugar, malates.

Prop.—In strips or quilled pieces of various lengths, tough and pliable; olive-brown on the surface, white within; fibrous; inodorous; taste, when chewed for some time, acrid, burning; yields its virtues to water and vinegar.

Oper.—Stimulant, diuretic, diaphoretic; in large doses emetic.

Use.—In venereal diseases, but its efficacy is doubtful. It is sometimes useful in the sequelæ of syphilis; in chronic rheumatism; lepra and scrofulous swellings; and chewing frequently thin slices of the recent root has been found useful in paralysis of the tongue; externally, the fresh bark soaked in vinegar is useful for keeping open issues.

Dose.—Of the powder gr.j. gradually increased to gr.x. Vide *Decoctum*.

Off. Prep.—*Decoct. Sarsæ Comp. Extractum Mezerei Æthereum*.

MICA PANIS. Crumb of Bread. The soft part of bread, made with wheaten flour.

Use.—To make poultices and pills.

Off. Prep.—*Cataplasma Carbonis*.

MISTŪRA AMMŌNIĀCI. Ammoniacum Mixture. (*Ammoniaci* unc. $\frac{1}{4}$; *Aquæ Destillatæ* fl.unc.viiij. Rub the ammoniacum, adding the water gradually, until the mixture assumes a milky appearance; then strain through muslin.)

Comp.—The resin and oil suspended by means of gum in water; when kept, the resin separates.

Oper. & Use.—The same as those of ammoniacum.

Dose.—Fl.unc.ss. or fl.unc.j., given with ipecacuanha, tincture of squill, &c.

Incomp.—Corrosive sublimate, acetate of potassium, oxymel, ether, spirit of nitrous ether.

MISTŪRA AMYGDĀLÆ. Almond Mixture. (*Pulveris Amygdalæ Compositi* unc.ij.; *Aquæ Destillatæ* fl.unc.xvj. Rub together, adding the water by degrees, and strain.)

Comp.—The oil of the almond suspended in water by means of its mucilage; and fecula.

Over.—Demulcent, cooling; if the bitter almond be used, sedative.

Use.—Mainly as a vehicle for the administration of other medicines.

Dose.—Fl.unc.j. to fl.unc.ij.

Incomp.—Acids and all acidulous salts, spirits, tinctures, spirit of nitrous ether, and common pump water.

MISTŪRA CREASŌTI. Creasote Mixture. (*Creasoti, Acidi Acetici Glacialis*, āā min.xv.; *Spiritus Juniperi* fl.dr.ss.; *Syrupi* fl.unc.j.; *Aquæ Dest.* fl.unc.xv. Mix the creasote with the acid, then gradually add the water, and lastly the syrup and spirit.)

Use.—A ready mode of administering creasote.

Dose.—Fl.unc.j. to fl.unc.ij.

MISTŪRA CRĒTÆ. Chalk Mixture. (*Cretæ Præparatæ* unc. $\frac{1}{4}$; *Acaciæ Gummi* unc. $\frac{1}{4}$; *Aquæ Cinnamomi* fl.unc.vijss.; *Syrupi* fl.unc.ss. Triturate the chalk and gum acacia with the cinnamon water, then add the syrup, and mix.)

Oper.—Antacid, astringent, absorbent.

Use.—In acidities of the stomach, particularly those attending dentition, provided the bowels be kept open; in diarrhœa, united with opium and catechu.

Dose.—Fl.unc.j. to fl.unc.ij. every three or four hours; or after every liquid motion.

MISTŪRA FERRI AROMATĪCA. Aromatic Mixture of Iron. (*Cinchonæ Rubræ Corticis contriti* unc.j.; *Calumbæ Radicis contritæ* unc.ss.; *Caryophyllorum contus.* unc. $\frac{1}{2}$; *Ferri* unc.ss.; *Tinct. Cardam.* fl.unc.iiij.; *Tinct. Aurantii* fl.unc.ss.; *Aquæ Menthæ Piperitæ* q.s. Macerate the bark, calumba, cloves, and iron in 12 ounces of peppermint water in a closed vessel for three days, agitating occasionally, then filter the liquid, adding as much peppermint

water to the filtrate as will make the product measure fl.oz.xijss.; to this add the tinctures, and preserve in a well-stoppered bottle.)

Oper.—Aromatic, chalybeate, emmenagogue, tonic.

Use.—In amenorrhœa and chlorosis, in convalescence from acute diseases, and in dyspepsia.

Dose.—Fl.unc.j. to fl.unc.ij.

MISTŪRA FERRI COMPŌSĪTA. Compound Mixture of Iron. (*Ferri Sulphatis* gr.xxv.; *Potassii Carbonatis* gr.xxx.; *Myrrhæ cont.* gr.lx.; *Sacchari* gr.lx.; *Spir. Myristicæ* fl.dr.iv.; *Aquæ Rosæ* fl.unc.ixss. Rub together the myrrh, carbonate of potassium and sugar; then add, while tritulating, seven ounces of the rose water, the spirit of nutmeg, and, lastly, the sulphate of iron dissolved in the residue of rose water. Pour the mixture directly into a glass bottle, and preserve from contact with air.)

Comp.—The salts are decomposed, and the mixture contains carbonate of iron and sulphate of potassium, suspended with the other ingredients.

Oper.—Tonic, emmenagogue.

Use.—In all cases in which preparations of iron are useful; particularly in amenorrhœa, hysteria, and chlorosis, depending on weak arterial action, after unloading the stomach and bowels.

Dose.—Fl.unc.j. to fl.unc.ij. twice or thrice a day.

Incomp.—Acids, vegetable astringents.

MISTŪRA GUAIACI. Guaiacum Mixture. (*Guaiaci Resinæ* unc.ss.; *Sacchari* unc.ss.; *Acaciæ Gummi* unc.½; *Aq. Cinnamomi* Oj. Rub the guaiacum with the sugar and acacia, and add gradually, while stirring, the cinnamon water.)

Oper.—The same as that of guaiacum in substance.

Use.—In rheumatism, gout, and dropsy.

Dose.—Fl.unc.ss. to fl.unc.ij. night and morning; diluting freely with tepid barley-water or gruel.

MISTŪRA SCAMMŌNII. Scammony Mixture. (*Scammonii* gr.v.; *Lactis* fl.unc.ij. Form an emulsion.)

Comp.—The gummy portion of the scammony, with a small portion of the o'co-resin, held suspended in the milk.

Use.—As a purgative.

Dose.—Fl.unc.j. to fl.unc.ij.

MISTŪRA SENNÆ COMPŌSĪTA. Compound Mixture of Senna. *Syn.* Black Draught. (*Magnesii Sulphatis* unc.iv.; *Extracti Glycyrrhizæ Liq.* unc.j.; *Tincturæ Sennæ* fl.unc.ijss.; *Tincturæ Cardamomi* Comp. fl.unc.jss.; *Infusi Sennæ* fl.unc.xv. Dissolve the sulphate in the infusion with the aid of gentle heat, then add the tinctures and the liquid extract.)

Use.—As a mild purgative for ordinary use.

Dose.—Fl.unc.j. to fl.unc.jss.

MISTŪRA SPĪRĪTUS VINI GALLĪCI. Mixture of French Brandy. (*Spir. Vini Gallici*, *Aq. Cinnamomi*, āā fl.unc.iv.; *Ovorum duorum Vitellos*; *Sacchari* unc.ss. Mix.)

Use.—Excitant. In cases where the stomach has lost its tone, whether from organic or other chronic disease. A dangerous mixture, calculated to encourage a desire for spirituous liquors. In small doses of great value in infantile diarrhœa of an adynamic type.

Dose.—Fl.unc.j. to fl.unc.ij.

MORI SUCCUS. Mulberry Juice. (*Morus nigra*. N.O. *Moraceæ*. l₂)
Indigenous.

Prop.—Inodorous; taste sweet, subacid; contains tartaric acid, jelly, and mucus.

Oper.—Cooling, laxative.

Use.—Seldom used medicinally; as an article of food mulberries are wholesome, unless eaten too freely, in which case they occasion diarrhœa.

Off. Prep.—*Syrupus Mori*.

MORPHINÆ ACĒTAS. Acetate of Morphine. (*Morphinæ Hydrochloratis* unc.ij.; *Liq. Ammoniacæ, Acidî Acetici, Aquæ Destillatæ*, sing. q.s. Dissolve the hydrochlorate in the water, precipitate the morphine by the solution of ammonia, and then add the acetic acid, and evaporate the solution, dry with gentle heat, and reduce to powder.)

Comp.— $C_{17}H_{19}NO_3, HC_2H_3O_2, 3H_2O$.

Prop.—White powder. Soluble in water and rectified spirit. From the solution a precipitate of morphine is thrown down by solution of potash, soluble in excess. The crystals, after the distillation of the spirit, burn without residue. With nitric acid it first becomes red and then yellow. The tincture of the perchloride of iron gives a blue tint. When sulphuric acid is added, acetous vapours are evolved.

Oper.—Narcotic.

Dose.—Gr. $\frac{1}{8}$ to gr. $\frac{1}{2}$.

Off. Prep.—*Liquor Morphinæ Acetatis*.

MORPHINÆ HYDROCHLŌRAS. Hydrochlorate of Morphine. (Prepared from opium.)

Comp.— $C_{17}H_{19}NO_3, HCl, 3H_2O$.

Prop.—In white powder or acicular crystals, nearly colourless, inodorous and bitter; soluble in 24 parts of water; soluble in alcohol. The precipitate with nitrate of silver is not entirely soluble in solution of ammonia, unless in excess, nor in hydrochloric nor nitric acid. In other respects the tests are those of the acetate. 20 grains dissolved in half an ounce of warm water, with solution of ammonia slightly in excess, give on cooling a crystalline precipitate, which, washed and dried, weighs 16 grains.

Use.—As a narcotic it is preferable to the acetate.

Dose.—Gr. $\frac{1}{8}$ to gr. $\frac{1}{2}$.

Off. Prep.—*Liquor Morphinæ Bimeconatis*. *Liquor Morphinæ Hydrochloratis*. *Suppositoria Morphinæ*. *Suppositoria Morph. c. Sap.* *Tinct. Chloroformi et Morphinæ*. *Trochisci Morphinæ*. *Trochisci Morphinæ et Ipecacuanhæ*.

MORPHINÆ HYDROCHLORĀTIS LIQUOR. Vide *Liquor Morphinæ Hydrochloratis*.

MORPHINÆ SULPHĀTIS. Sulphate of Morphine. (By forming a neutral solution of morphine with sulphuric acid, and crystallising.)

Comp.— $(C_{17}H_{19}NO_3)_2, H_2SO_4, 5H_2O$.

Prop.—Colourless silky crystals; soluble in water, solution precipitated by potash. Changed to orange-red by strong nitric acid, and to greenish-blue by perchloride of iron.

Oper.—Sedative.

Use.—Similar to the other salts of morphine.

Dose.—Gr. $\frac{1}{8}$ to gr. $\frac{1}{2}$.

MORRHUÆ OLEUM. Vide *Oleum Morrhuæ*.

MOSCHUS. Musk. Inspissated secretion found in the follicles of the prepuce. (*Moschus moschiferus*, the Musk Deer. Class *Mammalia*, Order *Ruminantia*. Asia.)

Prop.—Odour peculiar, aromatic, strong, durable; taste bitterish; colour dark reddish-brown; feel slightly unctuous; partially soluble in water, yielding to it taste and smell; soluble in alcohol and sulphuric acid, with the loss of its odour.

Oper.—Stimulant, antispasmodic.

Use.—In spasmodic affections, as hysteria, chorea, pertussis, trismus, and epilepsy. It raises the pulse, and excites the nervous system without heating. Very little employed on account of its high price.

Dose.—Gr.v. to gr.x. every three or four hours in a bolus.

MUCĪLĀGO ACĀCIÆ. Mucilage of Gum Acacia. (Dissolve four ounces of gum acacia in six fluid ounces of distilled water, and strain, if necessary.)

Oper.—Demulcent.

Use.—To allay the tickling which keeps up the cough in catarrh; but chiefly to suspend insoluble matters in water and thin fluids.

Dose.—Fl.dr.j. to fl.unc.j. united with syrup of poppies, occasionally.

Incomp.—Alcohol, ether, the metallic salts.

Off. Prep.—*Trochisci Acidi Tannici.* *Tro. Acidi Benzoici.* *Tro. Bismuthi.* *Tro. Catechu.* *Tro. Ferri Redacti.* *Tro. Ipecacuanhæ.* *Tro. Morphine.* *Tro. Morphine et Ipecacuanhæ.* *Tro. Potassii Chloratis.* *Tro. Santonini.* *Tro. Sodii Carbonatis.*

MUCĪLĀGO AMŸLI. Mucilage of Starch. (*Amyli* gr.cxx.; *Aquæ Destill.* Oss. Rub the starch with the water gradually added, then boil it for a few minutes.)

Prop.—A gelatinous, opaline, insipid, inodorous solution; soluble in boiling water, insoluble in alcohol.

Oper.—Demulcent, sheathing.

Use.—Seldom given by the mouth, except in abrasions of the stomach; as clysters in diarrhœa, dysentery, and other intestinal irritations, particularly as a vehicle for exhibiting opium in enema.

Incomp.—Iodine and its preparations.

Off. Prep.—*Enema Aloes.* *Enema Magnesii Sulphatis.* *Enema Opii.* *Enema Terebinthine.*

MUCĪLĀGO TRĀGĀCANTHÆ. Mucilage of Tragacanth. (Mix 60 grains of Tragacanth with two fluid drachms of rectified spirit; then pour in ten fluid ounces of distilled water, with constant agitation.)

Use.—For pharmaceutical purposes.

MYRISTICA: OLEUM MYRISTICÆ ET OLEUM MYRISTICÆ EXPRESSUM. Nutmeg, Volatile and Expressed Oil. (*Myristica fragrans* (*Myristica officinalis*). N.O. *Myristicaceæ*. The Molucas. l.)

Prop.—Nutmegs have a fragrant aromatic odour, and an agreeable pungent taste; are roundish, greyish-brown, streaked, unctuous, and easily cut. Alcohol extracts their active matter. The concrete or expressed oil is of firm consistence, of an orange colour, unctuous, and has the odour and taste of the nutmeg. It is obtained by pressure. The oil obtained by distillation is yellow, possessing the odour and taste of the nutmeg in an eminent degree.

Oper.—Stimulant, stomachic, narcotic in large doses.

Use.—To relieve nausea and vomiting, and to check diarrhœa; but chiefly to give flavour to other remedies. Being narcotic, they are hurtful in apoplectic and paralytic habits.

Dose.—Of the nutmeg gr.v. to gr.xv.; of the volatile oil min.j. to min.iv.

Off. Prep.—Of the nutmeg: *Pulv. Catechu Comp. Pulvis Cretæ Aromaticus. Spir. Armoracæ Comp. Tinct. Lavandulæ Comp.* Of the volatile oil: *Pil. Aloes Socotrinæ. Spir. Ammoniac Aromat. Spiritus Myristicæ.* Of the expressed oil: *Emplast. Calefaciens. Emplast. Picis.*

MYRRHA. Myrrh. A gum-resinous exudation from the stem. (*Balsamodendron Myrrha.* N.O. *Amyridaceæ.* Abyssinia, Arabia Felix.)

Comp.—Resin, gum, volatile oil, &c.

Prop.—Odour fragrant, peculiar; taste bitter, aromatic; in reddish-yellow, light, brittle, irregular tears, or in masses; partially soluble in distilled water, when aided by friction; alcohol dissolves only the resin; soluble in alkalis; easily pulverised.

Oper.—Stimulant, expectorant, antispasmodic, emmenagogue.

Use.—In amenorrhœa, leucorrhœa, cachectic complaints, asthma, chronic catarrh, and phthisis pulmonalis unattended by hectic or much active inflammation; also in aphthous sore mouths, spongy gums, &c.

Dose.—Gr.x. to gr.xxx. in powder, united with nitre, camphor, sulphate of potassium, sulphate of zinc, or of iron.

Off. Prep.—*Dec. Aloes Comp. Mist. Ferri Comp. Pilula Aloes et Myrrhæ. Pil. Asafetidæ Comp. Pil. Rhei Comp. Tinct. Myrrhæ.*

NECTANDRÆ CORTEX. Bebeeru Bark. The dried bark. (*Nectandra Rodiæi.* N.O. *Lauraceæ.* British Guiana. 12)

Prop.—Large flat pieces from one to two feet long and from two to six inches broad, heavy, hard, and fibrous; externally greyish-brown, internally reddish-brown; taste bitter and rather astringent, due to the presence of the alkaloid beberine.

Oper.—Tonic and antiperiodic.

Use & Dose.—See *Beberinæ Sulphas.*

NUX VOMICA. Nux Vomica. (*Strychnos Nux-vomica.* N.O. *Loganiaceæ.* East Indies. 2)

Prop.—Nearly circular and flat, about an inch in diameter, umbilicated and slightly convex on one side, externally of an ash-grey colour, thickly covered with short satiny hairs, internally translucent, tough and horny; inodorous, taste intensely bitter, poisonous. Its efficacy as a remedy depends on a peculiar alkaloid, strychnine, combined with igasuric acid.

Oper.—Tonic, stimulant; when taken in large doses, it produces tetanic spasms.

Use.—In dyspepsia, gout, rheumatism, atonic sickness, diarrhœa, and especially in paralysis of the lower extremities.

Dose.—*Vide Preparations.*

Off. Prep.—*Extractum Nucis Vomiceæ. Strychnina. Tinctura Nucis Vomiceæ.*

OLEĀTUM HYDRARGYRI. Oleate of Mercury. (*Hydrargyri Oxidi Flavi* unc.j.; *Acidi Oleici* unc.ix. Dissolve.)

Comp.—Oleate of mercury and oleic acid.

Prop.—Light brown, oleaginous, semi-solid, with the slight smell of oleic acid.

Oper.—Alterative.

Use.—To produce local and constitutional effects of mercury. To cause absorption of inflammatory products around joints, enlarged glands, &c.

OLEĀTUM ZINCI. Oleate of Zinc. (*Zinci Oxidi* unc.j.; *Acidi Oleici* unc.ix. Stir, heat and dissolve.)

Oper.—Sedative, astringent.

Use.—In eczema.

Off. Prep.—*Unguentum Zinci Oleati*.

OLĒO-RESINA CUBEÆ. Oleo-Resin of Cubebs. (*Cubebæ* lb.ij.; *Ætheris* Oiv. vel q.s. By percolation with ether, and subsequent evaporation.)

Oper.—Expectorant, diuretic, alterative to urinary passages.

Use.—In bronchitis, gonorrhœa, &c. As cubebs, but more diuretic action.

Dose.—Min.v. to min.xxx.

OLĒUM AMYGDĀLÆ. Almond Oil. (Expressed from both sweet and bitter almonds.)

Prop.—Nearly inodorous, bland oleaginous nutty taste; of a pale straw colour; unctuous, limpid, lighter than water; insoluble in water and alcohol, but miscible in distilled water by means of mucilage or yolk of egg; attracts oxygen from the atmosphere, and becomes dense, viscid, and rancid.

Oper.—Demulcent, emollient.

Use.—In catarrh and coughs, united with water by means of mucilage and sugar, or a few drops of solution of ammonia. An injection composed of oil of almonds fl.unc.iv. and solution of subacetate of lead min.viii., is said to be useful at the commencement of gonorrhœa.

Dose.—Fl.dr.j. to fl.unc.ss.

Off. Prep.—*Oleum Phosphoratum.* *Unguentum Cetacei.* *Ung. Resinæ.* *Ung. Simplex,* and the preparations containing it.

OLĒUM ANETHI. Oil of Dill. (Distilled from Dill in Britain.)

Prop.—Pale yellow colour, pungent odour, acrid sweetish taste.

Oper.—Stimulant, aromatic, carminative.

Use.—In flatulent colic, chiefly of infants.

Dose.—Min.j. to min.iv.

OLĒUM ANĪSI. Oil of Anise. (Obtained by distillation from the *Pimpinella Anisum* in Europe, and the *Illicium anisatum* in China.)

Comp.—Oil of anise, *anethol*, or anise camphor, consists of two isomeric bodies, fluid ($\frac{1}{2}$), and solid ($\frac{1}{2}$).

Prop.—Odour that of the fruit; taste aromatic, sweetish; pale yellow colour; ordinary oil of anise congeals between 50° and 60°F. (10° to 15°·5 C.); oil of star-anise only becomes solid at a few degrees above 32° F. (0°C.)

Oper.—Stimulant, carminative.

Use.—In flatulent colic.

Dose.—Min.j. to min.iv. rubbed up with sugar and camphor mixture.

Off. Prep.—*Essentia Anisi.* *Tinct. Camph. Comp.* *Tinct. Opii Ammoniata.*

OLĒUM ANTHEMĪDIS. Oil of Chamomile. (By distillation, in Britain, from the flowers.)

Prop.—Odour that of the flower; taste aromatic; colour when recent cerulean blue; but when old, a dark yellow.

Oper.—Stimulant, stomachic, antispasmodic.

Use.—In atonic dyspepsia, colic, cramps of the stomach, and as an adjunct to purgative pills.

Dose.—Min.j. to min.iv.

Off. Prep.—*Extractum Anthemidis*.

OLEŪM CAJUPŪTI. Cajuput Oil. (By distillation from the leaves of the *Melaleuca minor*.)

Comp.—Hydrate of cajuputene ($\frac{2}{3}$), isomeric with Borneo camphor $C_{10}H_{18}O$, and an oil ($\frac{1}{3}$) boiling at a higher temperature.

Prop.—Very mobile, transparent, of a fine pale bluish-green colour; it has a strong agreeable camphoraceous odour, and a warm aromatic taste, and leaves a sensation of coldness in the mouth.

Oper.—Diffusible, stimulant, antispasmodic, diaphoretic; also a topical stimulant.

Use.—In flatulent colic, hysteria, cholera, chronic rheumatism, and in low states of the system; externally, mixed with oil, in chronic rheumatism and gout; an agreeable addition to linseed poultices.

Dose.—Min.j. to min.iv.

Off. Prep.—*Linimentum Crotonis*. *Spiritus Cajuputi*.

OLEŪM CARŪI. Oil of Caraway. (By distillation, in Britain, from the fruit.)

Prop.—Odour that of the fruit; taste spicy, somewhat acrid; colour yellow; tenacious.

Oper.—Stimulant, carminative.

Use.—In flatulent colic; as an adjunct to purgative pills.

Dose.—Min.j. to min.iv.

Off. Prep.—*Confectio Scammonii*. *Pilula Aloes Barbādensis*.

OLEŪM CARYŎPHYLLI. Oil of Cloves. (By distillation, in Britain, from cloves.)

Prop.—Colourless when recent, but gradually becoming red-brown, having the odour of cloves, and a pungent spicy taste. Sinks in water.

Oper. & Use.—The same as cloves.

Dose.—Min.j. to min.iv.

Off. Prep.—*Conf. Scammonii*. *Pil. Colocynthis Comp.* *Pil. Colocynthis et Hyoscyami*.

OLEŪM CINNAMŌMI. Oil of Cinnamon. (Distilled from the bark.)

Prop.—Yellowish when recent, gradually becoming red, odour and taste of cinnamon. Sinks in water.

Oper.—Stimulant, carminative.

Use.—In colic, &c.

Dose.—Min.j. to min.iv.

OLEŪM COPAIBÆ. Oil of Copaiva. (Distilled from the oleo-resin.)

Comp.— $C_{10}H_{18}$, isomeric with turpentine.

Use.—The same as Copaiva.

Dose.—Min.v. to min.xx.

OLEŪM CORĬANDRI. Oil of Coriander. (Oil distilled, in Britain, from coriander fruit.)

Prop.—Yellowish, having the odour of coriander and a mild aromatic taste.

Oper.—Stimulant, aromatic, carminative.

Use.—In flatulence, and as a useful adjunct to purgative and carminative medicines.

Dose.—Min.j. to min.iv.

Off. Prep.—*Syrupus Sennæ*.

OLĚUM CROTŌNIS. Croton Oil. Oil expressed from the seeds. (*Croton Tiglium*. N.O. *Euphorbiaceæ*. Mo'uccas. 12)

Prop.—Colour brownish-yellow to dark reddish-brown, viscid consistence increased by age; odour faint, somewhat rancid and disagreeable, taste oily acrid. Soluble in alcohol.

Comp.—Crotonic acid, $C_9H_{11}O_2$, glycerine, oleic, palmitic, stearic, acetic, butyric, and other acids.

Oper.—Drastic purgative, counter-irritant.

Use.—In apoplexy, obstinate constipation, and whenever a quick and powerful action on the bowels is required, and externally as a counter-irritant in certain diseases of the chest and abdomen.

Dose.—Min. $\frac{1}{2}$ to min.j. made into pills with a few grains of rhubarb or crumb of bread, or rolled up with mucilage and syrup, or added to castor oil.

Off. Prep.—*Linimentum Crotonis*.

OLĚUM CUBĚBÆ. Oil of Cubebs. (By distillation, in Britain, from cubebs.)

Prop.—Colourless, or pale greenish-yellow, with the peculiar odour and taste of cubebs.

Comp.— $C_{15}H_{24}$.

Use.—The same as the fruit, but not so certain in its effects.

Dose.—Min.v. to min.xx.

OLĚUM EUCALYPTI. Oil of Eucalyptus. Distilled from the fresh leaves. (*Eucalyptus Globulus*, *Eucalyptus amygdalina*, and probably other species. N.O. *Myrtaceæ*.)

Comp.—Probably a simple hydrocarbon, with an oxidised product which increases with age.

Prop.—Odour aromatic; taste spicy, pungent; colourless or pale straw-coloured.

Oper.—Antiseptic.

Use.—In surgical operations; also as inhalation in ozæna, bronchitis, phthisis, and diphtheria.

Dose.—Min.j. to min.iv.

OLĚUM JUNIPĚRI. Oil of Juniper. (By distillation in Britain from the full-grown unripe fruit. *Juniperus communis*. N.O. *Coniferae*.)

Comp.—Terpenes and camphors.

Prop.—Odour similar to that of turpentine; taste acrid, hot, similar to that of the fruit; colour greenish-yellow; deposits a feculent matter when kept.

Oper.—Stimulant, carminative, diaphoretic, diuretic.

Use.—In dropsies; advantageously added to digitalis when it is given in the form of pills.

Dose.—Min.j. to min.iv., rubbed up with sugar or mucilage and water.

Off. Prep.—*Spiritus Juniperi*.

OLĚUM LAVANDŪLÆ. Oil of Lavender. (By distillation in Britain from the flowers of *Lavandula vera*. N.O. *Labiatae*.)

Comp.—A mixture of a terpene $C_{10}H_{16}$, and a substance allied to camphor.

Prop.—Odour very fragrant, that of the flower ; taste warm ; of a lemon colour.

Oper.—Stimulant.

Use.—In hysteria and nervous headaches.

Dose.—Min.j. to min.iv. on a lump of sugar.

Off. Prep.—*Linimentum Camphoræ Compositum*. *Spiritus Lavandulæ*.
Tinctura Lavandulæ Composita.

OLEŪM LIMŌNIS. Oil of Lemon. (Expressed from fresh lemon peel.) Imported chiefly from Sicily.

Prop.—Pale yellow, fragrant lemon odour, pungent aromatic taste.

Comp.—Isomeric with oil of turpentine $C_{10}H_{16}$. Also a bitter principle.

Oper.—Aromatic, stimulant.

Use.—To give an agreeable flavour to other medicines.

Dose.—Min.j. to min.iv.

Off. Prep.—*Linimentum Potassii Iodidi cum Sapone*. *Spiritus Ammoniac Aromaticus*.

OLEŪM LĪNI. Linseed Oil. (Expressed without heat from the bruised seeds.)

Comp.—Nearly the same as that of olive oil, with some mucilage.

Prop.—Odour strong ; taste bland, oleaginous ; does not congeal by cold, but gradually thickens by exposure to the air ; soon becomes rancid.

Oper.—Demulcent, emollient, laxative.

Use.—It has been given with advantage to allay irritation in bronchitis and catarrh ; but it is chiefly used, in the form of enema, in flatulent colic, attended with constipation, and in abrasions of the rectum : externally in burns and wounds.

Dose.—Fl.unc.ss. to fl.unc.j. ; in enema fl.unc.ij. to fl.unc.vj.

OLEŪM MENTHÆ PIPERĪTÆ. Oil of Peppermint. (By distillation in Britain from the fresh herb when in flower. *Mentha piperita*. N.O. *Labiatae*.)

Comp.—A stearoptene, *menthol* $C_{10}H_{20}O$, together with a liquid terpene.

Prop.—Odour strong, that of the plant ; taste acrid, very hot and biting, with a peculiar sensation of coldness ; lighter than water ; colourless or pale yellow, becoming darker and reddish with age.

Oper.—Stimulant, antispasmodic, carminative.

Use.—In cramp of the stomach, and flatulent colic.

Dose.—Min.j. to min.iv. rubbed up with sugar or mucilage.

Off. Prep.—*Aqua Menthæ Piperitæ*. *Essentia Menthæ Piperitæ*. *Pilula Rhei Comp.* *Spiritus Menthæ Piperitæ*. *Tinctura Chloroformi et Morphine*.

OLEŪM MENTHÆ VĪRĪDIS. Oil of Spearmint. (By distillation in Britain from the fresh herb when in flower. *Mentha viridis*. N.O. *Labiatae*.)

Comp.—Similar to that of oil of peppermint.

Prop.—Odour that of the plant ; taste warm, pungent ; colourless or pale yellow, becoming reddish by age.

Oper.—Stimulant, carminative.

Use.—In flatulence and anorexia.

Dose.—Min.j. to min.iv. on a lump of sugar.

Off. Prep.—*Aqua Menthæ Viridis*.

OLEŪM MORRHŪÆ. Cod-liver Oil. (Oil prepared from the liver of the *Gadus Morrhua* by heat not exceeding 180° F. ($82^{\circ}2$ C.))

Comp.—Olein, margarin, and biliary principles, phosphoric and sulphuric acids, with salts of calcium, magnesium, and iron; also bromine and iodine in minute quantities. Experience has shown that the pale oil is to be generally preferred. The darker oil contains more empyreumatic matter, and is much less agreeable.

Prop.—Transparent, varying in colour from pale straw to a rich golden brown; odour of fresh-boiled cod; greasy bland taste, leaving a disagreeable impression on the palate. A drop of sulphuric acid added to a few drops of the oil on a porcelain slab gives a violet colour, passing soon to a yellowish or brownish red.

Oper.—Stimulant, alterative, nutritious.

Use.—In phthisis, chronic rheumatism, and in scrofulous and cachectic diseases.

Dose.—℞.dr.j. to ℞.dr.viij.

OLĒUM MYRISTICÆ. Vide *Myristica*.

OLĒUM MYRISTICÆ EXPRESSUM. Vide *Myristica*.

OLĒUM OLIVÆ. Olive Oil. (*Olea europæa*. N.O. *Oleaceæ*. South of Europe. ℞ Expressed from the ripe fruit.)

Comp.—72 olein, 28 palmitin.

Prop.—Faint agreeable odour, bland oleaginous taste; transparent, of the palest straw colour; cannot combine with water or alcohol, but may be diffused through water by means of mucilage; not volatile; congeals at 36° F. (2°·2 C.); attracts oxygen, and becomes rancid when exposed to the air: forms soaps with the alkalis and lime; plasters with oxides of lead.

Oper.—Demulcent, emollient, gently laxative, nutritious.

Use.—In catarrhs and pulmonary complaints, in emulsion with mucilage; in a simple state, when acrid matters are taken into the stomach; it has been advantageously used as an injection in gonorrhœa; an adjunct to enemas in dysentery and fissures of the rectum; and in the formation of ointments and plasters.

Dose.—℞.dr.j. to ℞.unc.j., triturated with mucilage, or mixed with water by means of a few drops of solution of potash or ammonia.

Off. Prep.—*Charta Epispastica*. *Emplastrum Ammoniaci cum Hydrargyro*. *Empl. Hydrargyri*. *Emplastrum Picis*. *Emplastrum Plumbi*. *Emplastrum Saponis Fuscum*. *Enema Magnesii Sulphatis*. *Linimentum Ammoniac*. *Linimentum Calcis*. *Linimentum Camphoræ*. *Unguentum Cantharidis*. *Unguentum Hydrargyri Compositum*. *Ung. Hydrargyri Nitratis*. *Ung. Veratrinæ*.

OLĒUM PHOSPHORĀTUM. Phosphorated Oil. (Phosphorus dissolved in oil of almonds at a temperature of 180° F. (82°·2 C.))

Prop.—A clear and colourless, or but slightly coloured oil; phosphorescent in the dark; contains about 1 per cent. of phosphorus.

Oper.—Tonic; aphrodisiac.

Use.—In neuralgia, and generally in neurotic debility, especially in such cases as have resulted from cerebral or spinal exhaustion.

Dose.—Min.v. to min.x.

OLĒUM PIMENTÆ. Oil of Pimento. (By distillation in England from the fruit.)

Prop.—Odour very fragrant; taste that of the pimento in an increased degree; colour when recent reddish, but by keeping becomes a red brown; heavier than water.

Oper.—Stimulant.

Use.—In debility of the stomach, colic, and tympanites.

Dose.—Min.j. to min.iv. rubbed with sugar.

OLĒUM PINI SYLVESTRIS. Fir-wood Oil. Distilled from the fresh leaves. (*Pinus sylvestris*. N.O. *Coniferæ*.)

Prop.—Colourless; aromatic odour, flavour pungent, but not unpleasant. Soluble in rectified spirit. Sp. gr. 0.870.

Oper.—Stimulant, anti-rheumatic.

Use.—As an external application in rheumatism. Also in chronic laryngeal irritation by inhalation.

Off. Prep.—*Vapor Olei Pini Sylvestris*.

OLĒUM RICINI. Castor Oil. Oil expressed from the seeds. (*Ricinus communis*. N.O. *Euphorbiaceæ*.)

Comp.—Ricinoleic acid $C_{18}H_{34}O_3$, with glycerine; also palmitin, stearin, cholesterin in small amounts.

Prop.—Recently drawn inodorous, nearly insipid; colourless, or of a very pale straw colour; thick, but perfectly transparent; lighter than water. Soluble in one volume of absolute alcohol, and in two of rectified spirit. It is usually viscid, with a slightly nauseous odour, and rather acrid taste, and soon becomes rancid by keeping; thickens; deepens in colour to a reddish-brown, and then has an acrid nauseous taste.

Oper.—Purgative.

Use.—In all cases where stimulant purgatives would be hurtful; particularly in dysentery, colica pictorum; calculous complaints; and, as it operates very quickly, in spasmodic affections. It is an excellent purge at all times for children, women in childbed, and after surgical operations in which the viscera are at all concerned. It is also a good adjunct to enemata.

Dose.—Fl.dr.j. to fl.unc.j. either floated on a little water, and covered with a small quantity of brandy, or in the following draught: *R. Olei Ricini* fl.unc.ss.; *Mucilaginis* q.s. *Tere optime et paulatim adde Aquæ Destillatæ* fl.unc.j.; *Spir. Lavandulæ Comp.* min.xx.; *Syr. Tolutani* fl.dr.ss. *Misce.* Vel *R. Olei Ricini* fl.unc.iv.; *Liq. Potassæ* fl.dr.ij.; *Aquæ Cinnamomi* fl.unc.viij. *Misce.* *Dosis* sit fl.unc.j. ad fl.unc.ij.

Off. Prep.—*Collodium Flexile. Linimentum Sinapis Compositum. Pil. Hydrargyri Subchloridi Composita.*

OLĒUM ROSMARINI. Oil of Rosemary. (By distillation from the tops of the flowering plant. *Rosmarinus officinalis*. N.O. *Labiatae*.)

Comp.—A terpene, isomeric with turpentine $C_{10}H_{16}$, and a body allied to camphor.

Prop.—Odour very fragrant, and taste like that of the plant; limpid like water; deposits crystals of camphor when long kept.

Oper.—Stimulant.

Use.—In nervous complaints.

Dose.—Min.j. to min.iv. rubbed up with sugar.

Off. Prep.—*Linimentum Saponis. Spiritus Rosmarini. Tinct. Lavandulæ Comp.*

OLĒUM RUTÆ. Oil of Rue. (Distilled from the fresh herb. *Ruta graveolens*. N.O. *Rutaceæ*.)

Prop.—Odour that of the plant, but weaker, disagreeable; taste acrid, bitter, sharp, hot; colour yellow; when kept it becomes brown, and deposits a brownish resinous sediment; easily congeals.

Oper.—Antispasmodic; emmenagogue; externally rubefacient.

Use.—In hysteria; and the convulsive affections of infancy attendant on dentition.

Dose.—Min.j. to min.iv. rubbed with sugar or mucilage.

OLĒUM SABINÆ. Oil of Savin. (By distillation in Britain from the fresh plant. *Juniperus Sabina*. N.O. *Coniferae*.)

Comp.— $C_{10}H_{16}$.

Prop.—Odour and taste of the plant; limpid like water; colour pale yellow.

Oper.—Stimulant, emmenagogue, in large doses causing abortion; externally vesicant.

Use.—In the same cases for which the plant is employed.

Dose.—Min.j. to min.iv.

OLĒUM SANTALI. Oil of Sandal Wood. *Syn.* Oleum Santali Flavi. (*Santalum album*. N.O. *Santalaceae*.)

Prop.—Odour strongly aromatic; flavour pungent, spicy; pale yellow; thick consistence, neutral or slightly acid reaction. Soluble in alcohol.

Oper.—Astringent.

Use.—In gonorrhœa, gleet; also in leucorrhœa, diarrhœa, and chronic bronchitis.

Dose.—Min.x. to min.xxx.

OLĒUM SINAPIS. Oil of Mustard. (Oil distilled with water from black mustard seeds, after the expression of the fixed oil.)

Prop.—Colourless or pale yellow. Sp. gr. 1.015 to 1.020. Soluble in alcohol and ether, and sparingly in water. Odour intensely penetrating. Taste acrid and burning. Applied to the skin it produces almost instant vesication.

Oper.—Stimulant, vesicant.

Use.—In the preparation of the Linimentum Sinapis Compositum.

OLĒUM TEREBINTHINÆ. Oil of Turpentine. (Oil distilled from the turpentine of the *Pinus australis* (*palustris*), *Tæda*, and sometimes *Pinaster* and *sylvestris*.)

Comp.— $C_{10}H_{16}$.

Prop.—Odour penetrating, taste hot, pungent; colourless, limpid, soluble in alcohol and ether. Commences boiling at about 320° F. (160° C.), and almost entirely distils below 356° F. (180° C.)

Oper.—Stimulant, astringent, diuretic, sudorific, anthelmintic, purgative, rubefacient.

Use.—In chronic rheumatism, lumbago, and sciatica; and in passive hæmorrhages; in chronic discharges from mucous surfaces, in atonic diseases, first stage of acute hydrocephalus; applied to indolent tumours; and in embrocation, in rheumatism and bruises. It is given in very large doses, alone or united with honey, against the tænia solium, which it brings away entire, dead, after two or three doses. It is most useful, in the form of enema, in hysterical affections, especially when accompanied with flatulent colic.

Dose.—Min.x. to min.xxx. in the first cases; but for the expulsion of tænia fl.dr.ij. to fl.dr.iv.

Off. Prep.—Linimentum Terebinthinæ. Confectio Terebinthinæ. Enema Terebinthinæ. Lin. Terebinthinæ Aceticum. Ung. Terebinthinæ.

OLĒUM THEOBROMATIS. Oil of Theobroma. *Syn.* Cacao Butter. (A concrete oil obtained by expression and heat from the ground seeds of *Theobroma Cacao*. N.O. *Byttneriaceae*.)

Prop.—Of the consistency of tallow; colour yellowish, chocolate odour, taste bland and agreeable, fracture clean, presenting no appearance of foreign matter. Does not become rancid from exposure to the air. Melts between 86° and 95° F. (30° and 35° C.)

Use.—In the preparation of the suppositories.

OPIUM. Opium. The inspissated juice obtained by incisions from the unripe capsules. (*Papaver somniferum*. N.O. *Papaveraceæ*. South of Europe and Asia Minor. ☉)

Comp.—Morphine, codeine, codamine, laudanine, pseudomorphine, papaverine, thebaine, narcotine, apomorphine, apocodeine, meconic acid, thebolactic acid, &c. 100 parts of dry powdered opium should yield not less than 9.5 parts, and not more than 10.5 parts of morphine.

Prop.—Odour heavy, narcotic; taste nauseous, bitter; in rounded, irregular or flattened masses, weighing from 8 ounces to 2 pounds, enveloped in the remains of the poppy leaves, and generally covered with the chaffy fruit of a species of rumex; solid, tenacious; of a reddish-brown colour, yellowish when powdered; marks on paper a light brown interrupted streak.

Oper.—Stimulant in small doses, but in larger narcotic, antispasmodic, diaphoretic, sedative, anodyne; externally its stimulant effects are considerable, but soon followed by its narcotic.

Use.—In all painful affections, where the inflammatory diathesis is not very considerable; in diarrhoea and dysentery; intermittents; in typhus, in smaller doses as a cordial, in larger to allay irritation and produce sleep; in cholera and pyrosis; in rheumatism when inflammatory fever is not present; retrocedent gout; and in convulsive and spasmodic diseases. When combined with calomel in inflammation, unless the pulse be full and strong, and in syphilis, and also to arrest the progress of gangrene. To be prescribed with great caution for children.

Dose.—Gr. $\frac{1}{4}$ to gr.ss. to produce its stimulant effects; gr.j. to gr.ij. its narcotic; but in spasmodic complaints it has been given in larger doses.

Incomp.—Solution of lime, alkaline carbonates, perchloride of mercury, nitrate of silver, sulphates of zinc, copper, and iron, infusion of cinchona, astringent infusions and decoctions; solution of catechu and of kino; acetates of lead.

*** When opium has been taken as a poison, the stomach should be first evacuated by the stomach-pump worked with infusion of red cinchona bark, or by emetics containing very little water, and after the whole of the opium has been evacuated, acidulous fluids freely exhibited; but these and all watery fluids are hurtful if vomiting has not been freely induced.

Off. Prep.—*Acidum Meconicum*. *Codeina*. *Confectio Opii*. *Emplastrum Opii*. *Enema Opii*. *Extractum Opii*. *Extract. Opii Liquidum*. *Lini-mentum Opii*. *Liquor Morphineæ Acetatis*. *Liquor Morphineæ Bimeconatis*. *Liquor Morphineæ Hydrochloratis*. *Morphineæ Acetas*. *Morphineæ Hydrochloras*. *Morphineæ Sulphas*. *Pilule Ipecacuanhæ cum Scilla*. *Pil. Plumbi c. Opio*. *Pil. Saponis Comp.* *Pulv. Cretæ Aromaticus c. Opio*. *Pulv. Ipecacuanhæ Comp.* *Pulv. Kino Comp.* *Pulv. Opii Comp.* *Suppositoria Plumbi Comp.* *Tinct. Camphoræ Comp.* *Tinct. Opii*. *Tinct. Opii Ammoniata*. *Trochisci Opii*. *Ung. Gallæ c. Opii*. *Vinum Opii*.

OS USTUM. Bone Ash. The residue of bones burnt to a white ash in contact with the air.

Comp.—Phosphate of calcium mixed with about 10 per cent. of carbonate of calcium and a little fluoride of calcium and phosphate of magnesium.

Use.—In the preparation of *Calcii Phosphas* and *Sodii Phosphas*.

OVI ALBŪMEN ET VITELLUS. Egg Albumen, and Yolk of Egg. (*Gallus Bankiva*, var. *domesticus*, the Common Fowl. Class *Aves*, Order *Gallinaceæ*.)

Oper.—Nutritive.

Use.—In convalescences the yolk is given, beaten up with sugar and wine; triturated with oils, it renders them miscible with water. The white or albumen is employed as an antidote in cases of poisoning with corrosive sublimate or salts of copper.

Off. Prep.—*Mistura Spiritus Vini Gallici*.

OXŸMEL. Oxymel. (*Mellis Depurati* unc.xl.; *Acidi Acetici* fl.unc.v.; *Aquæ Destillatæ* fl.unc.v. Mix the acid with water, and then add the honey made hot.)

Oper.—Cooling, diaphoretic; externally detergent.

Use.—In fevers and pulmonary affections; as an adjunct to gargles in cynanche tonsillaris.

Dose.—Fl.dr.j. to fl.dr.ij. dissolved in barley-water.

OXŸMEL SCILLÆ. Oxymel of Squill. (*Mellis Depurati* lb.ij.; *Aceti Scillæ* Oj. Mix and evaporate by a water-bath, until the product when cold shall have a sp. gr. 1.32.)

Oper.—Expectorant, diuretic; in large doses emetic.

Use.—In asthma, chronic coughs, dropsy; to cause vomiting in pertussis.

Dose.—Fl.dr.ss. to fl.dr.j.

PAPĀVĒRIS CAPSŪLÆ. Poppy Capsules, nearly ripe and dried. (*Papaver somniferum*. N.O. *Papaveraceæ*.) Cultivated in Great Britain.

Oper.—Narcotic, sedative, anodyne.

Use.—Externally as a fomentation (unc.iv. of the dried heads being bruised and boiled in Oiv. of water to Oij.) to inflamed or ulcerated parts. The addition of a little distilled vinegar aids the narcotic power of the decoction.

Off. Prep.—*Decoctum Papaveris*. *Extractum Papaveris*. *Syrupus Papaveris*.

PARAFFINUM DURUM. Hard Paraffin. *Syn.* Paraffin Wax or Solid Paraffin. (A mixture of several of the harder members of the paraffin series of hydrocarbons.) By distillation from shale.

Prop.—Colourless, inodorous, tasteless. Insoluble in water, slightly soluble in absolute alcohol, freely in ether. Melts at 110° to 145° F. (43°·3 to 62°·8 C.)

Use.—For its physical properties, in the preparation of ointments.

Off. Prep.—*Unguentum Acidi Borici*. *Ung. Acidi Carbol.* *Ung. Acidi Salicyl.* *Ung. Eucalypti.* *Ung. Glycerini Plumbi Subacet.* *Ung. Hydrarg. Ox. Rub.* *Ung. Potassæ Sulphuratæ.* *Ung. Sulph. Iod.* *Ung. Veratrinæ.*

PARAFFINUM MOLLE. Soft Paraffin. *Syn.* Petrolatum; Vaseline. (A semi-solid mixture of softer members of the paraffin series of hydrocarbons.) By purifying the less volatile portions of petroleum.

Prop.—White or yellowish, soft, greasy. Free from acidity or unpleasant odour or flavour, even when warmed to 120° F. (48°·9 C.) Melts at 95° to 105° F. (35° to 40°·5 C.) Insoluble in water, freely soluble in ether, chloroform, benzol, &c. Not saponified by alkalis.

Oper.—Emollient.

Use.—For its physical properties.

Off. Prep.—All the above-mentioned ointments in which hard paraffin is employed. Also *Ung. Hydrarg. Nitrati. Dilutum. Ung. Zinci Oleati.*

PAREIRÆ RADIX. Pareira Root. The dried root. (*Chondrodendron tomentosum*. N.O. *Menispermaceæ*. South America.)

Use.—See *Decoctum Pareiræ*.

Off. Prep.—*Decoctum Pareiræ. Extractum Pareiræ. Extractum Pareiræ Liquidum*

PEPSIN. Pepsin. (A preparation of the mucous lining of a fresh and healthy stomach of the pig, sheep, or calf.)

Prop.—A light, yellowish-brown powder, having a faint but not disagreeable odour, and a slightly saline taste, without any indication of putrescence; only slightly soluble in water or spirit. Two grains with an ounce of distilled water and 5 minims of hydrochloric acid will dissolve 100 grains of hard-boiled white of egg, when mixed, digested, and stirred for 30 minutes at a temperature of 130° F. (54°·4 C.)

Oper.—It has the power of aiding digestion of food in the stomach by supplying the deficiency of the gastric juice.

Use.—In cases of dyspepsia, especially those which supervene on a long illness, in which the power of digestion seems to fail from mere weakness. In cases of dysphagia or severe vomiting it may be added to enemata with a view of supplying to the mucous membrane of the large bowels a nutriment as nearly as possible in the state in which it leaves the stomach.

Dose.—Gr.ij. to gr.v.

PETROLEUM SPIRIT. *Syn.* Benzoline. (Appendix, B.P.)

Prop.—Colourless, volatile, inflammable. Sp. gr. 0·67 to 0·70.

Use.—As a test for copaiba, of which one volume is soluble in four volumes of petroleum spirit.

PHENOL-PHTHALEIN. (Appendix, B.P.) Produced by action of phenol and phthalic anhydride.

Use.—In preparation of the tincture of phenol-phthalein, which gives an intense red colour with free potash or soda, and is hence employed to indicate the termination of volumetric reactions.

PHOSPHÖRUS. Phosphorus. A colourless, non-metallic element, obtained from bones, waxy, shining, luminous in the dark, which can only be preserved under water. Chemical symbol, P, equivalent 31.

Prop. & Tests.—Sp. gr. 1·77. Emits white vapour when exposed to the air; soft and flexible at common temperatures, melts at 110° F. (43°·3 C.), ignites in the air at a temperature a little above its melting point, burning with a luminous flame, and producing dense white fumes. Insoluble in water, but soluble in ether, and in boiling oil of turpentine.

Use.—For making phosphoric acid, but it has been used internally as a

stimulant and aphrodisiac, in low states of the nervous system, in doses of gr. $\frac{1}{40}$ th to gr. $\frac{1}{10}$ th, but the greatest caution is required.

Off. Prep.—*Acid. Phosphoricum Concentratum. Acid. Phosphoricum Dilutum. Oleum Phosphoratum. Pilula Phosphori.*

PHYSOSTIGMĀTIS SEMEN. Calabar Bean. *Syn.* *Physostigmatis Faba.* The dried seed. (*Physostigma venenosum. N.O. Leguminosce. Western Africa.*)

Prop.—An inch to an inch and a quarter long, three quarters of an inch broad, with a very firm, hard, brittle, shining integument of a brownish-red, pale chocolate, or ash-grey colour. Irregularly kidney-shaped with two flat sides, and a furrow running longitudinally along its convex margin. Within the testa is a kernel consisting of two cotyledons, hard, white, and pulverisable, tasting like the edible leguminous seeds, without bitterness, acrimony, or aromatic flavour. It yields its virtues to alcohol, and imperfectly to water. The cotyledons acquire a permanent pale yellow colour when moistened with solution of potash.

Comp.—Ordinary constituents of beans, with physostigmine, $C_{15}H_{21}N_3O_2$.

Oper.—Sedative, inducing paralysis of the lower extremities and contraction of the iris.

Use.—In chorea and tetanus.

Off. Prep.—*Extractum Physostigmatis.*

PHYSOSTIGMINA. Physostigmine. *Syn.* Eserine. (An alkaloid from the alcoholic extract of Calabar bean.)

Comp.— $C_{15}H_{21}N_3O_2$.

Prop.—Colourless or pinkish crystals. Readily soluble in alcohol and in diluted acids; slightly so in water.

Oper.—Myositic.

Use.—To cause contraction of the pupil.

Off. Prep.—*Lamellæ Physostigminæ.*

PILOCARPINÆ NITRAS. Nitrate of Pilocarpine. (The nitrate of an alkaloid from the extract of jaborandi.)

Comp.— $C_{11}H_{16}N_2O_2 \cdot HNO_3$.

Prop.—White crystalline powder or acicular crystals. Soluble in water; slightly soluble in cold rectified spirit, freely in hot.

Oper.—Sialagogue, diaphoretic; myositic.

Use.—In coryza, acute bronchitis; in dropsy and uræmic convulsions. In ophthalmic practice in intraocular hæmorrhage, and albuminuric retinitis.

Dose.—Gr. $\frac{1}{20}$ to gr. $\frac{1}{2}$.

PILULA ALŒS BARBĀDENSIS. Pill of Barbadoes Aloes. (*Aloes Barbadosensis contritæ unc.ij.; Saponis Duri unc.j.; Olei Carui fl.dr.j.; Confectionis Rosæ unc.j.* Beat them together that they may be intimately mixed into a mass fit for making pills.)

Oper.—In their operation, this and the following preparations of aloes are alike warm stomachic purgatives.

Use.—In habitual constipation.

Dose.—Gr.v. to gr.x.

PILŮLA ALŒS ET ASAFĖTĪDÆ. Pill of Aloes and Asafœtida. (*Aloes Socotrinæ, Conf. Rosæ, Asafœtidæ, Saponis Duri, sing. partes æquales q.s.*)

Oper.—Purgative, emmenagogue, stomachic, anodyne.

Use.—In dyspepsia attended with flatulence and constipation; hysteria; amenorrhœa.

Dose.—Gr.v. to gr.x. twice a day; or at bed-time.

PILŮLA ALŮES ET FERRI. Pill of Aloes and Iron. (*Ferri Sulphatis* unc.jss.; *Aloes Barbadosis pulverizatæ* unc.ij.; *Pulv. Cinnamomi Compositi* unc.ij.; *Conf. Rosæ* unc.iv. Reduce the sulphate to powder, mix it with the aloes and cinnamon powder, and lastly make into a mass with the confection.)

Use.—An excellent combination of a tonic and purgative.

Dose.—Gr.v. to gr.x.

PILŮLA ALŮES ET MYRRHÆ. Pill of Aloes and Myrrh. (*Aloes Socotrinæ* unc.ij.; *Crocī* unc.ss.; *Myrrhæ contritæ* unc.j.; *Theriaceæ* unc.j.; *Glycerini* q.s. Beat together into a mass.)

Oper.—Cathartic, emmenagogue.

Use.—In chlorotic, hypochondriacal, and cachectic conditions, to stimulate and open the bowels.

Dose.—Gr.v. to gr.x.

PILŮLA ALŮES SOCOTRINÆ. Pill of Socotrine Aloes. (*Aloes Socotrinæ contritæ* unc.ij.; *Saponis Duri* unc.j.; *Olei Myristicæ* fl.dr.j.; *Conf. Rosæ* unc.j.)

Use.—In habitual constipation, hysteria, dyspepsia.

Dose.—Gr. v. to gr.x.

PILŮLA ASAFÆTIDÆ COMPŎSITA. Compound Pill of Asafoetida. *Syn.*—*Pilula Galbani Composita.* (*Asafætidæ, Galbani, Myrrhæ,* sing. unc.ij.; *Theriaceæ, pondere,* unc.j.)

Use.—In hysteria, and other nervous affections.

Dose.—Gr.v. to gr.x.

PILŮLA CAMBŎGĬÆ COMPŎSITA. Compound Pill of Gamboge. (*Cambogiæ contritæ* unc.j.; *Aloes Barbadosis contritæ* unc.j.; *Pulveris Cinnamomi Compositi* unc.j.; *Saponis Duri* unc.ij.; *Syrupi* q.s. Mix the powders together, then adding the soap and syrup, beat into a mass.)

Oper.—Cathartic.

Use.—In obstinate constipation.

Dose.—Gr.v. to gr.x. in pills occasionally.

PILŮLA COLOCYNTHIDIS COMPŎSITA. Compound Pill of Colocynth. (*Aloes Barbadosis, Scammonice Resinæ, āā* unc.ij.; *Colocynthidis Pulpæ contritæ* unc.j.; *Potassii Sulphatis contritæ* unc.½; *Olei Caryophylli* fl.dr.ij.; *Aquæ Destillatæ* q.s. Mix the powders, add the oil of cloves, and beat into a mass with the aid of the water.)

Oper.—Cathartic, emmenagogue.

Use.—In habitual constipation; in chlorosis and hysteria.

Dose.—From gr.v. to gr.x.

PILŮLA COLOCYNTHIDIS ET HYOSCYĂMI. Pill of Colocynth and Henbane. (*Pil. Colocynthidis Comp.* unc.ij.; *Extracti Hyoscyami* unc.j.)

Use.—The same as the Colocynth Pill, but milder and less apt to gripe.

PILŮLA CONĬI COMPŎSITA. Compound Pill of Hemlock. (*Ext. Coniī* gr.ijss.; *Ipecacuanhæ pulv.* gr.ss.; *Theriaceæ* q.s.)

Oper.—Narcotic, antispasmodic, expectorant, diaphoretic.

Use.—In phthisis, pertussis, and bronchitis.

Dose.—Gr.v. to gr.x.

PILŮLA FERRI CARBŌNĀTIS. Pill of Carbonate of Iron. (*Ferri Carbonatis Saccharatæ* unc.j.; *Conf. Rosæ Gallicæ* unc.½.)

Oper.—Tonic, emmenagogue.

Use.—In dyspepsia and chlorosis.

Dose.—Gr.v. to gr.xx. twice or thrice a day.

PILULA FERRI IODĪDI. Pill of Iodide of Iron. *Ferri* gr.xl.; *Iodi* gr.lxxx.; *Sacchari Purificati contriti* gr.lxx.; *Radici Glycyrrhizæ contritæ* gr.cxl.; *Aquæ Destillatæ* min.l. Agitate the iodine with the iron and water until the froth becomes white; pour the fluid upon the sugar, triturate, and gradually add the liquorice.)

Use.—In scrofula and secondary syphilis.

Dose.—Gr.iiij. to gr.viiij.

PILŮLA HYDRARGŸRI. Mercurial Pill. *Syn.* Blue Pill. (*Hydrarg.* unc.ij.; *Confect. Rosæ* unc.iiij.; *Glycyrrhizæ Rad. cont.* unc.j. Rub the mercury with the confection until the globules disappear; then add the liquorice, and beat the whole into a uniform mass.)

Oper.—Alterative, purgative.

Use.—To induce mercurial action in syphilis; to improve the biliary secretions; to remove lymphatic obstructions; to purge in jaundice, dropsy, chronic constipation, and intestinal obstruction.

Dose.—Gr. iiij. to gr.viiij. twice a day, united with opium, if the bowels are easily affected.

PILŮLA HYDRARGŸRI SUBCHLORĪDI COMPOSĪTA. Compound Pill of Subchloride of Mercury. *Syn.* *Pilula Calomelanos Composita.* (*Hydrargyri Subchloridi* unc.j.; *Antimonii Sulphurati* unc.j.; *Guaiaci Resinæ contritæ* unc.ij.; *Olei Ricini fl.* unc.j. vel q. s. Triturate the subchloride with the antimony, then add the resin and oil, and beat into a mass.) It contains 1 gr. of the subchloride in 5 gr. of the pill.

Oper.—Alterative, diaphoretic, purgative.

Use.—In lepra; secondary syphilis, affecting the skin; and old venereal ulcers. Frequently employed for its purgative action.

Dose.—Gr.v. to gr.x. in pills, night and morning.

PILŮLA IPECACUANHÆ CUM SCILLA. Pill of Ipecacuanha with Squill. (*Pulv. Ipecac. Comp.* gr.iiij.; *Scillæ contritæ, Ammoniaci contriti*, āā gr.j.; *Theriaccæ* q.s.)

Oper. & Use.—Diaphoretic and expectorant in bronchial affections and phthisis.

Dose.—Gr.v. to gr.x.

PILŮLA PHOSPHŌRI. Phosphorus Pill. (*Phosphori* gr.iiij.; *Balsami Tolut.* gr.cxx.; *Ceræ Flav.* gr.lvij.; *Saponis Animalis* gr.xc.) Three grains contain $\frac{1}{30}$ th of a grain of phosphorus.

Oper.—Tonic; aphrodisiac.

Use.—In cachexia, neuralgia, or general debility, especially after nervous exhaustion.

Dose.—Gr.ij. to gr.iv.

PILŮLA PLUMBI CUM OPIO. Pill of Lead and Opium. (*Plumbi*

Acetatis in pulverem subtilissimum reductæ gr. xxxvj. ; Opii contriti gr. vj. ; Conf. Rosæ Gallicæ gr. vj. Beat into a uniform mass.)
Use.—In active hæmorrhages. Each four-grain pill contains gr. iij. of acetate of lead, and of opium gr. ss.
Dose.—Gr. iij. to gr. v. every two or three hours till four or five have been taken, or the hæmorrhage checked.

PILŮLA RHEI COMPÖŠITA. Compound Rhubarb Pill. (*Rhei Rad. contritæ unc. iij. ; Aloes Socotrinæ contritæ unc. ij ½ ; Myrrhæ contritæ unc. jss. ; Saponis Duri unc. jss. ; Olei Menthæ Piperitæ fl. dr. jss. ; Glycerini unc. j. ; Theriacæ, pondere, unc. iij.*)
Oper.—Laxative, stomachic.
Use.—In dyspepsia attended with constipation.
Dose.—Gr. v. to gr. x.

PILŮLA SAPÖNIS COMPÖŠITA. Compound Pill of Soap. *Syn.* Pilula Opii. (*Opii contriti unc. ss. ; Saponis Duri unc. ij. ; Glycerini q. s.*)
Oper.—Anodyne and narcotic.
Use.—To allay pain and procure sleep.
Dose.—Gr. iij. and upwards ; gr. v. contain gr. j. of opium.

PILŮLA SCAMMÖNIÏ COMPÖŠITA. Compound Scammony Pill. (*Scammonie Resinæ unc. j. ; Jalapæ Resinæ unc. j. ; Saponis Animalis contriti unc. j. ; Tincturæ Zingiberis Fortioris fl. unc. j. ; Spiritus Rect. fl. unc. ij.*) Dissolve the mixed ingredients by a gentle heat, and by means of a water-bath evaporate the spirit until the mass has acquired a suitable consistence for forming pills.
Oper.—Purgative.
Use.—In constipation, especially when there is any objection to the use of aloes.
Dose.—Gr. v. to gr. xv.

PILŮLA SCILLÆ COMPOSITA. Compound Squill Pill. (*Scillæ contritæ unc. j ½ ; Zingiberis contriti unc. j. ; Saponis Duri unc. j. ; Ammoniaci contriti unc. j. ; Theriacæ, pondere, unc. ij. vel q. s.* Mix.)
Oper.—Expectorant, diuretic.
Use.—In asthma and chronic catarrh ; as an adjunct to digitalis in hydrothorax, and other forms of dropsy.
Dose.—Gr. v. to gr. x. twice or thrice a day.

PIMENTA. Pimento, Allspice, Jamaica Pepper. The dried unripe berries. (*Pimenta officinalis (Eugenia Pimenta).* N.O. *Myrtaceæ.* West Indies. $\frac{1}{2}$)
Prop.—A small round two-celled berry, of the size of a small pea, odour aromatic, resembling a mixture of cinnamon, nutmeg, and cloves ; taste pungent, but mixed like the odour ; colour reddish-brown.
Oper.—Stimulant, carminative.
Use.—Chiefly as a condiment ; and as an adjunct to other medicines.
Dose.—Gr. v. to gr. xl.
Off. Prep.—*Aqua Pimentæ. Oleum Pimentæ.*

PIMENTÆ OLĚUM. Vide *Oleum Pimentæ.*

PĪPER NIGRUM. Black Pepper. The unripe fruit dried in the sun. (*Piper nigrum.* N.O. *Piperacæ.* West Indies. $\frac{1}{2}$)

Prop.—Small, roundish, wrinkled; tegument brownish-black, containing a greyish-yellow globular seed. Odour aromatic; taste pungent, fiery. Its pungency depends on an oleo-resin.

Oper.—Tonic, antiperiodic, stimulant, carminative.

Use.—To check nausea in gouty habits; remove hiccough. Occasionally, as cubebs, in gonorrhœa and gleet; also in hæmorrhoids. A watery infusion of pepper has been found a useful gargle in relaxation of the uvula.

Dose.—Gr.x. to gr.xx. variously combined.

Off. Prep.—*Confectio Opii. Confectio Piperis. Pulvis Opii Compositus.*

*** White pepper is the same fruit, freed from its cuticle by a preparation of lime and oil of mustard called Chunam, applied before it is dried. It is less pungent.

PIX BURGUNDICA. Burgundy Pitch. A resinous exudation from the stem, melted and strained. (*Pinus Picea (Pinus Abies, Abies excelsa).* N.O. *Coniferæ.* Imported from Switzerland.)

Comp.—Resin, an essential oil.

Prop.—Concrete, semi-transparent, unctuous, tenacious, fragrant.

Oper.—Rubefacient, generally exciting an exudation of serous fluid.

Use.—Externally, spread on leather as plasters; in catarrh, pertussis, dyspnœa.

Off. Prep.—*Emplast. Ferri. Emplast. Picis.*

PIX LIQUIDA. Tar. (Obtained by destructive distillation from the *Pinus sylvestris* and various other species of *Pinus*.)

Comp.—Resin, empyreumatic oil, charcoal, acetic acid.

Prop.—Of a deep brown colour, semi-fluid, tenacious; odour empyreumatic.

Oper.—Stimulant, diuretic, sudorific; externally detergent.

Use.—Internally in ichthyosis; externally it is applied to foul ulcers, tinea capitis, lepra, and generally to chronic cutaneous diseases, and the vapour has been of service in chronic affections of the bronchial mucous membrane.

Off. Prep.—*Ung. Picis Liquidæ.*

PLATINUM BLACK. (Appendix, B.P.) Platinum in a state of minute division.

Use.—As a test for amylic alcohol, which it slowly oxidises to valerianic acid.

PLATINUM FOIL. (Appendix, B.P.) Employed in the preparation of the test solution of perchloride of platinum.

PLUMBI ACETAS. Acetate of Lead. (*Plumbi Oxidi unc.xxiv.; Acidi Acetici Oij. vel q.s.; Aquæ Destillatæ Oj.*)

Comp.— $\text{Pb}(\text{C}_2\text{H}_3\text{O}_2)_2 \cdot 3\text{H}_2\text{O}$.

Prop.—Odour acetous; taste sweet, styptic; colour very white, with a silky lustre; in crystalline masses, slightly efflorescent; soluble in distilled water; the solution becomes turbid in common water; soluble also in alcohol. Carbonate of sodium throws down a white, iodide of potassium a yellow, precipitate. It is rendered black by sulphuretted hydrogen. 38 grains dissolved in water require for complete precipitation 200 grain-measures of the volumetric solution of oxalic acid.

Oper.—Astringent; in weak solutions cooling and sedative; in strong (gr.lx. to water fl.unc.vj.) stimulant.

Use.—Internal, in visceral hæmorrhages, washed down with water acidulated with distilled vinegar, which seems to prevent its deleterious effects. Also in chronic diarrhœa and dysentery. External, in solution in phlegmonous inflammation, burns, bruises, gonorrhœa, &c.

Dose.—Gr.j. to gr.iv. made into a pill with gr.½ or gr.¼ of opium and crumb of bread. Distilled water must be used for the solution, and a little acetic acid added.

Incomp.—Alkalis, earths, acids, alum; borax, soaps, tartarated iron, and antimony; solution of lime, hard water, sulphuretted hydrogen.

Off. Prep.—*Glycerinum Plumbi Subacetatis*. *Liquor Plumbi Subacetatis*. *Pilulæ Plumbi cum Opio*. *Suppositoria Plumbi Composita*. *Unguentum Plumbi Acetatis*.

PLUMBI CARBŌNAS. Carbonate of Lead.

Comp.—Probably $2\text{PbCO}_3, \text{Pb}(\text{OH})_2$.

Prop.—Soft, white, heavy powder. Insoluble in water, soluble with effervescence in dilute acetic acid, this solution is precipitated white by sulphuric acid, and yellow by iodide of potassium. Blackened by sulphuretted hydrogen.

Oper.—Astringent, sedative.

Use.—Sprinkled on parts affected with local inflammation; in the formation of ointments and plasters.

Off. Prep.—*Unguentum Plumbi Carbonatis*.

PLUMBI SUBACETĀTIS LIQUOR. See *Liquor Plumbi Subacetatis*.

PLUMBI IODĪDUM. Iodide of Lead. (*Plumbi Nitratis*, *Potassii Iodidi*, ãã unc.iv.; *Aquæ Destill.* q.s. Dissolve the nitrate by the aid of heat in a pint and a half of water, and the iodide in half a pint, and mix the solutions. Collect, wash and dry the precipitate.)

Comp.— PbI_2 .

Prop.—Golden-yellow powder or crystalline scales, scarcely soluble in cold, readily in hot water; solution crystallises on cooling; sublimed by heat, the vapours being at first yellow and then violet coloured. This preparation ought to be kept in the dark.

Oper.—Alterative, mild stimulant.

Use.—In glandular affections, scrofula; and externally, to cause absorption of indolent tumours, in porrigo capitis, and carcinomatous tumours.

Off. Prep.—*Emplastrum Plumbi Iodidi*. *Ung. Plumbi Iodidi*.

PLUMBI NITRAS. Nitrate of Lead.

Comp.— $\text{Pb}(\text{NO}_3)_2$.

Prop.—In colourless octahedral crystals, which are nearly opaque, permanent in the air, of a sweetish astringent taste, soluble in water and in alcohol. The aqueous solution is precipitated black by sulphuretted hydrogen, white by diluted sulphuric acid, yellow by iodide of potassium. It decolorises sulphate of indigo.

Use.—In onychia maligna, externally applied as a powder; also as a test for sulphates, and to form the iodide of lead.

PLUMBI OXĪDUM. Oxide of Lead or Litharge.

Comp.— PbO .

Prop.—In scales of a pale brick-red colour; semi-vitrified. Soluble in dilute nitric and acetic acids, either solution when neutral giving a yellow precipitate with iodide of potassium; is rendered black by

hydrosulphuric acid. The precipitate with potash is white and soluble in an excess of the alkali.

Use.—For pharmaceutical purposes, and as an application to excoriated parts, and superficial ulceration.

Off. Prep.—*Plumbi Acetas. Liquor Plumbi Subacetatis. Emplastrum Saponis Fuscum. Empl. Plumbi.*

PODOPHYLLI RHIZOMA ET RESINA. Podophyllum dried rhizome and its resin, obtained by means of rectified spirit. (*Podophyllum peltatum*. N.O. *Ranunculaceæ*. American May-Apple. Mandrake.) Podophyllin.

Prop.—The podophyllum occurs in thin rhizomes, brown, jointed, with numerous radicles; the resin is a pale yellow or orange-brown amorphous powder, soluble in rectified spirit and ammonia, precipitated from the former solution by water, from the latter by acids. Soluble in pure ether.

Oper.—Drastic hydragogue, cathartic, similar to jalap.

Use.—In cases of hepatic congestions, and in habitual constipation.

Dose.—Of the powder gr.x. to gr.xx.; of the resin gr.½ to gr.ij. given with henbane, belladonna, or cannabis indica, to lessen its griping properties.

POTASSA CAUSTICA. Caustic Potash. *Syn.* Potassæ Hydras. (Prepared by evaporating the solution of potash to dryness in an iron vessel.)

Comp.—KHO, with some impurities, such as a little carbonate of potassium, silica, lime, and oxide of iron, which do not affect its medicinal properties. 56 grains dissolved in water leave but a trace of sediment, and require for neutralisation at least 900 grain measures of the volumetric solution of oxalic acid.

Prop.—Solid, hard, white; deliquescent in the air; soluble in rectified spirit; powerfully alkaline and corrosive; feels soapy between the fingers, owing to its solvent action upon the skin. (It is generally run into little cylindrical moulds, and ought to be kept in well-corked bottles.)

Oper.—Powerfully escharotic.

Use.—For forming issues, and as a caustic application to ulcers.

Off. Prep.—*Potassii Permanganas.*

POTASSA SULPHURATA. Sulphurated Potash. *Syn.* Hepar Sulphuris; Potassii Sulphuretum. (*Potassii Carbonatis* unc.x.; *Sulphuris Sublimati* unc.v. Mix and heat them gradually in a crucible.)

Prop.—Inodorous while dry, but when moistened, fœtid; taste acrid; colour liver-brown; solid, brittle, deliquescent, decomposed by water and exposure to air. Sulphuretted hydrogen is freely evolved when hydrochloric acid is dropped into an aqueous solution.

Oper.—Expectorant, diaphoretic; externally stimulant.

Use.—In chronic asthma, catarrh and rheumatism; herpetic and other cutaneous diseases and cancer. Its solution is useful as a wash in scabies, lepra, psoriasis, and tinea capitis. It is sometimes used as a bath or lotion in chronic rheumatism.

Dose.—Gr.ij. to gr.viii. combined with soap or extract of conium in pills twice or thrice a day. Externally sixty grains to an ounce of lard.

Incomp.—Acids, acidulous salts; metallic and earthy salts.

Off. Prep.—*Ung. Potassæ Sulphurata.*

POTASSII ACETAS. Acetate of Potassium. (*Potassii Carbon.* unc.xx.; *Acidi Acetici* Oij. vel q.s. Mix, and add by degrees enough of acetic

acid to saturate the alkali. Then strain and evaporate to dryness in a sand-bath with heat, cautiously applied.)

Comp.— $\text{KC}_2\text{H}_3\text{O}_2$.

Prop.—Inodorous; taste sharp, pungent; white, shining foliaceous masses; deliquescent. Almost entirely soluble in rectified spirit. The watery solution decomposes spontaneously; does not tinge litmus nor turmeric. Tartaric acid throws down a crystalline precipitate, and a dilute solution of perchloride of iron a deep red one. Its solution is unaffected by sulphhydrate of ammonium. With sulphuric acid gives off acetic acid vapour.

Oper.—Mildly cathartic, diuretic, alterative.

Use.—In pyrexia, dropsy, jaundice; also in acute rheumatism and as antilithic.

Dose.—Gr.x. to gr.lx. as a diuretic; dr.ij. to dr.iiij. open the bowels.

Incomp.—Mineral acids, corrosive sublimate, nitrate of silver, sulphates of sodium and of magnesium, hydrochlorate of ammonium, tartrate of potassium.

POTASSII BICARBONAS. Crystallised Bicarbonate of Potassium. (Prepared by forcing carbonic acid into a solution of carbonate of potassium under considerable pressure.)

Comp.— KHCO_3 .

Prop.—Transparent, colourless crystals, the primary form of which is a right rhombic prism; inodorous; taste mildly alkaline; soluble in water; slightly affects the colour of turmeric; effervesces with nitric acid, and when the acid is in excess gives no precipitate with chloride of barium, and only a sparing one with nitrate of silver. Diluted hydrochloric acid causes strong effervescence, and from the resulting solution perchloride of platinum throws down a yellow precipitate. 50 grains exposed to a low red heat leave 34.5 grains of a white residue, requiring for exact saturation 500 grain-measures of the volumetric solution of oxalic acid. 20 grs. of the bicarbonate will neutralise 14 grains of citric, and 15 grains of tartaric acid.

Oper.—Antacid, rendering urine and blood alkaline; diuretic.

Use.—In certain forms of dyspepsia, acute diseases, acute rheumatism, and in certain urinary affections.

Dose.—Gr.x. to gr.xl.

Off. Prep.—*Liquor Potassæ Effervescens.*

POTASSII BICHRŌMAS. Bichromate of Potassium.

Comp.— $\text{K}_2\text{CrO}_4 \cdot \text{CrO}_3$.

Prop.—Red, transparent, quadrangular tables, soluble in water; on adding chloride of barium to the solution a yellowish-white chromate of barium is precipitated, and with nitrate of silver the purplish-red chromate of silver. At a high temperature is decomposed into oxide of chromium and yellow chromate of potassium.

Use.—To prepare the valerianate of sodium and chromic acid, and as a test for ferrous salts.

POTASSII BROMIDUM. Bromide of Potassium. (*Bromini fl.unc.iv.; Liquoris Potassæ Oij.; Carbonis Ligni pulveris unc.ij.; Aquæ Destill. ferventis Ojss.*)

Comp.— KBr .

Prop.—White transparent cubical crystals, inodorous; taste pungent saline; soluble in water, less so in spirit. Its aqueous solution gives a white crystalline precipitate with tartaric acid. When its solution

in water is mixed with a little chlorine, chloroform agitated with it in falling to the bottom exhibits a red colour. 10 grains require for complete decomposition not less than 838 nor more than 850 grain-measures of the volumetric solution of nitrate of silver. Gives no blue colour on being treated with starch.

Oper.—Alternative. In large doses produces sleepiness and headache, and paralysis of the lower extremities and of the generative organs.

Use.—In glandular affections, nymphomania, menorrhagia, and in pharyngeal and laryngeal diseases. Its main use, however, is in treatment of epilepsy, for which it is often regarded as a specific. It is also employed as a sedative and soporific in hysterical and nervous cases.

Dose.—From gr.v. to gr.xxx. twice or thrice a day.

POTASSII CARBONAS. Carbonate of Potassium. (Obtained from commercial pearl-ash, the product of lixiviation of wood ashes, by treating the pearl-ash with its own weight of distilled water, and evaporating the solution so formed to dryness, while it is kept briskly agitated.

Comp.— K_2CO_3 , with about 16 per cent. of water of crystallisation.

Prop.—Inodorous; taste alkaline, caustic; soluble in water; but insoluble in spirit, effervescing with dilute hydrochloric acid, and forming a solution with which perchloride of platinum gives a yellow precipitate; crystals minute, white, deliquescent; turns turmeric brown; gives no precipitate with carbonate of sodium, chloride of barium, and only in a very slight degree with nitrate of silver. It must be kept in a well-closed bottle. 83 grains require for neutralisation 980 grain-measures of the volumetric solution of oxalic acid. 20 grains of the carbonate will neutralise 17 grains of citric, and 18 of tartaric acid.

Oper.—Diuretic, antacid, antilithic.

Use.—Like that of caustic potash, but with less local action. Sometimes in pertussis.

Dose.—Gr.x. to gr. xxx. in solution; gr.xx. dissolved in fl.unc.viij. of water, and mixed with fl.dr.iv. of lemon juice, forms an effervescing draught.

Incomp.—Mineral acids, borax, chloride and acetate of ammonium, alum, sulphate of magnesium, chloride of calcium, solution of lime, all the metallic salts.

Off. Prep.—*Atropina.* *Decoctum Aloes Comp.* *Enema Aloes.* *Liquor Arsenicalis.* *Liquor Potassæ.* *Mistura Ferri Composita.* *Potassa Sulphurata.* *Potassii Acetas.* *Potassii Bicarbonas.* *Potassii Chloras.* *Potassii Citras.* *Potassii Ferrocyanidum.* *Potassii Tartras.*

POTASSII CHLORAS. Chlorate of Potassium. (Prepared by passing a stream of chlorine through a concentrated solution of carbonate of potassium and slaked lime until the alkali is neutralised.)

Prop.—In colourless rhomboidal crystalline plates; inodorous; taste cool and saline; sparingly soluble in cold water; gives no precipitate with nitrate of silver or oxalate of ammonium; melts by heat, giving off oxygen. With a few drops of sulphuric acid the crystals become yellow, then red, and exhale the yellow vapour of peroxide of chlorine. It explodes when triturated with sulphur or sulphides.

Comp.— $KClO_3$.

Oper.—Refrigerant, diuretic, and supposed to supply oxygen to the system.

Use.—In typhus, cancrum oris, stomatitis, mercurial ulceration of the mouth, and other depressing affections.

Dose.—From gr.x. to gr.xxx.

Off. Prep.—*Potassii Permanganas. Trochisci Potassii Chloratis.*

POTASSII CITRAS. Citrate of Potassium. (Formed by neutralising carbonate of potassium by citric acid.)

Comp.— $K_3C_6H_5O_7$.

Prop.—White powder, taste saline and slightly acid, deliquescent; heated with sulphuric acid it forms a brown fluid, gives off an inflammable gas and an acetous odour; a white precipitate, soluble in acetic acid, is thrown down on boiling a mixed solution of the salt and chloride of calcium. After heating to redness 102 grains, the alkaline residue requires for exact neutralisation 1000 grain-measures of the volumetric solution of oxalic acid.

Oper.—Refrigerant, diuretic, diaphoretic.

Use.—In pyrexia, irritability of the stomach, and in gouty conditions.

Dose.—Gr.xx. to gr.lx.

POTASSII CYANIDUM. Cyanide of Potassium. (Prepared by heating ferrocyanide of potassium until gas ceases to be evolved.)

Comp.—KCN.

Prop.—White opaque crystalline masses, deliquescent, with odour of hydrocyanic acid. Soluble in water, the solution is alkaline and gives no precipitate with ferrocyanide of potassium.

Use.—In the preparation of *Bismuthum Purificatum*.

POTASSII FERRICYANIDUM. Ferricyanide of Potassium. *Syn.* Red Prussiate of Potash. (Appendix, B.P.)

Comp.— $K_6Fe_2C_{12}N_{12}$.

Prop.—Red crystals, soluble in water, the solution giving a blue precipitate with a dilute solution of a ferrous salt, no precipitate with a ferric salt.

Use.—As a test to distinguish ferrous from ferric salts.

POTASSII FERROCYANIDUM. Ferrocyanide of Potassium. *Syn.* Yellow Prussiate of Potash.

Comp.— $K_4FeC_6N_6 \cdot 3H_2O$.

Prop.—Large yellow crystals, soluble in water, the solution giving deep blue precipitates with soluble ferric salts, brick-red precipitate with sulphate of copper, and white precipitate with acetate of lead. Hydrocyanic acid is evolved when the ferrocyanide is heated with dilute sulphuric acid.

Use.—As a test to distinguish ferrous from ferric salts, and in the preparation of *Acidum Hydrocyanicum Dilutum* and *Potassii Cyanidum*.

POTASSII IODIDUM. Iodide of Potassium. (*Liquoris Potassæ* cong.j.; *Iodi* unc.xxj. vel q.s.; *Carbonis Ligni* unc.ijj.; *Aquæ Destillatæ ferventis* q.s.) The iodate of potassium is first formed, and converted into the iodide of potassium.

Comp.—KI.

Prop.—Crystals, opaque cubes, or quadrangular prisms, inodorous, taste penetrating; very soluble in water, less so in alcohol; commonly feebly alkaline; becoming blue on the addition of nitric acid and cold starch or a minute quantity of solution of chlorine. It gives a crystalline precipitate with tartaric acid. A yellow precipitate is thrown down by acetate of lead, soluble in boiling water. The aqueous solution is only faintly precipitated by saccharated solution

of lime. The precipitate with nitrate of silver dissolved in strong solution of ammonia, strained and treated with nitric acid, remains clear. 10 grains require for complete precipitation about 602 grain-measures of the volumetric solution of nitrate of silver.

Use.—The same as that of iodine; but chiefly as an alterative in secondary syphilis, rheumatism, lepra, strumous inflammation and abscess, asthma, and pulmonary emphysema. In some persons, if long continued, it causes iodism.

Dose.—From gr.ij. to gr.xx.

Incomp.—Acids, metallic salts not iodides.

Off. Prep.—*Linimentum Iodi.* *Lin. Potassii Iodidi cum Sapone.* *Liquor Iodi.* *Tinct. Iodi.* *Ung. Iodi.* *Ung. Potassii Iodidi.*

POTASSII NITRAS. Nitrate of Potassium, or Nitre. (Nitrate of potassium of commerce, purified, if necessary, by crystallisation from solution in distilled water.)

Comp.— KNO_3 .

Prop.—Inodorous; taste cool, bitterish, penetrating; crystals six-sided prisms; permanent in the air; brittle, soluble in water. From this solution nothing is thrown down by chloride of barium or nitrate of silver; warmed in a test tube with sulphuric acid and copper wire it evolves ruddy nitrous fumes. Its solution, acidulated with hydrochloric acid, gives a yellow precipitate with perchloride of platinum. Thrown on burning charcoal it deflagrates, carbonate of potassium being left.

Oper.—Diuretic, refrigerant; in large doses purgative.

Use.—In fevers, dropsy, acute rheumatism, herpetic eruptions, active hæmorrhages, mania. A small piece allowed to dissolve slowly in the mouth often removes incipient cynanche tonsillaris; hence its utility in gargles.

Dose.—Gr.x. to gr.xxx.

Incomp.—Sulphuric acid, sulphates of sodium and magnesium, alum, the metallic salts.

Off. Prep.—*Argenti et Potassii Nitræs.*

POTASSII PERMANGĀNAS. Permanganate of Potassium. (*Potassæ Causticæ* unc.v.; *Manganesii Oxidi Nigri pulverizati* unc.iv.; *Potassii Chloratis* unc.ijss.; *Acidi Carbonici* q.s.; *Aquæ Destillatæ* Oijss. A concentrated solution of caustic potash is added to the chlorate of potassium and oxide of manganese powdered together; and the whole evaporated to dryness, then exposed to a dull red heat until it has become semi-fused. The mass is cooled, pulverised, and boiled in water; the supernatant fluid is decanted, and saturated with carbonic acid; it is then evaporated, and the permanganate obtained by crystallisation.

Comp.— KMnO_4 .

Prop.—Dark purple, slender prismatic crystals; inodorous; sweet astringent taste; soluble in water. The crystals heated to redness decrepitate, evolve oxygen gas, and leave a black residue; gr.v. dissolved in water requires for complete decoloration a solution of 44 grains of granulated sulphate of iron, acidulated with fl.dr.ij. of dilute sulphuric acid.

Oper.—Antiseptic and disinfectant.

Use.—In the form of gargle or lotion to remove decomposing matter, and to cleanse diseased surfaces. Internally in diabetes, but of doubtful service in this disease.

Dose.—Gr.j. to gr.v.

Off. Prep.—*Liquor Potassii Permanganatis.*

POTASSII SULPHAS. Sulphate of Potassium. (The salt which remains after the distillation of nitric acid ignited until the excess of acid is driven off; then dissolved in water, and crystallised.)

Comp.— K_2SO_4 .

Prop.—Inodorous; taste bitter; crystals small six-sided prisms, ended by six-sided pyramids; hard, transparent, permanent in the air; sparingly soluble in water, insoluble in alcohol; there is no precipitate with oxalate of ammonium; a yellowish precipitate is thrown down by perchloride of platinum, and a white precipitate insoluble in nitric acid by chloride of barium; with heat it decrepitates.

Oper.—Purgative, alterative.

Use.—In the visceral obstructions to which children are liable; and as an adjunct to other purgatives.

Dose.—Gr.xv. to gr.lx.

Incomp.—Nitric and hydrochloric acids, tartaric acid, chloride of calcium, salts of mercury, nitrate of silver, salts of lead.

Off. Prep.—*Pil. Colocynthis Comp. Pulvis Ipecacuanhæ Comp.*

POTASSII TARTRAS. Tartrate of Potassium. (*Potassii Tartratis Acidæ* unc.xx.; *Potassii Carbonatis* unc.ix. vel q.s.; *Aquæ Destill. ferventis* Oijss. Dissolve the carbonate in the water, add the tartrate till the liquor is neutralised; boil and filter. Concentrate the liquor till a pellicle forms on its surface, and then set aside to cool and crystallise. The residual liquor will yield more crystals by further concentration and cooling.)

Comp.— $K_2C_4H_4O_6.H_2O$.

Prop.—Inodorous, neutral; taste bitter; colourless, four- or six-sided prisms, but generally in the form of a white granular powder, soluble in its own weight of water, soluble in alcohol. Affects neither litmus nor turmeric. On the addition of an acid the bitartrate is thrown down. The precipitates by chloride of barium and acetate of lead are soluble in dilute nitric acid. Heated with sulphuric acid, it forms a black tarry fluid, evolving an inflammable gas and a burnt-sugar odour. 122 grs. heated to redness leave an alkaline residue, which requires for neutralisation 990 grain-measures of the volumetric solution of oxalic acid.

Oper.—Cooling, laxative, and diuretic.

Use.—To open the bowels in febrile diseases, mania, and hypochondriasis; and as an adjunct to senna, and the resinous purgatives in solution, the griping effects of which it corrects.

Dose.—Gr.lx. to unc.ss. in solution as a purgative; as a diuretic gr.xx. to gr.lx.

Incomp.—Acids; infusion of acid fruits; chloride of calcium; lime, magnesia, sulphates of sodium, of potassium, and of magnesium; nitrate of silver, acetate of lead, and chloride of ammonium.

POTASSII TARTRAS ACIDA. Acid Tartrate of Potassium. *Syn.* Potassæ Bitartras. Cream of Tartar. (Obtained from the crude tartar deposited during the fermentation of grape juice, and from the lees of wine.)

Comp.— $KHC_4H_4O_6$.

Prop.—Inodorous; reddens litmus; taste acid, pleasant; crystals small, irregular; brittle, pulverulent; sparingly soluble in water,

insoluble in spirit; decomposed when kept in solution; at a red heat is converted into the carbonate.

Oper.—Mildly purgative, refrigerant, diuretic.

Use.—In ascites and general dropsy, the result of cardiac, renal, or hepatic disease. Dissolved in water, with a small quantity of white wine, some sugar, and lemon peel, it forms an excellent beverage in febrile diseases, under the name of imperial drink.

Dose.—Gr.xx. to gr.lx. as a refrigerant and diuretic; and to open the bowels unc. $\frac{1}{2}$ to unc. $\frac{3}{4}$ is required.

Incomp.—Alkalis, alkaline earths, mineral acids.

Off. Prep.—*Acidum Tartaricum. Antimonium Tartaratum. Conf. Sulphur. Ferrum Tartaratum. Potassii Tartras. Pult. Jalapæ Comp. Soda Tartarata.*

PRUNUM. Prune. The dried drupe. (*Prunus domestica*. N.O. *Rosaceæ*. South of France. h)

Prop.—Ovoid or oblong; black, shrivelled; no marked odour; taste sweet, mucilaginous, acidulous.

Oper.—Cooling, laxative, nutrient.

Use.—A domestic remedy in chronic constipation.

Off. Prep.—*Confectio Sennæ.*

PTEROCARPI LIGNUM. Red Sandal Wood. (*Pterocarpus Santalinus*. N.O. *Leguminosæ*. East Indies. h)

Prop.—Aromatic, faint peculiar odour, an obscurely astringent taste; colour deep bright red; in heavy logs, raspings, or small chips.

Use.—As a colouring material.

Off. Prep.—*Tinctura Lavandulæ Composita.*

PULVIS AMYGDALÆ COMPÖSĪTUS. Compound Powder of Almonds. (*Amygdalæ Dulcis* unc.vii.j.; *Sacchari Purificati* unc.iv.; *Acaciæ Gum.* unc.j.)

Use.—For making the almond mixture.

PULVIS ANTIMÖNIÄLIS. Antimonial Powder. James's Powder. (*Antimonii Oxidi* unc.j.; *Calcii Phosphatis* unc.ij.) A mild preparation of antimony, and, being uniform in strength, is now a certain and useful preparation.

Comp.—Oxide of antimony and phosphate of calcium.

Prop.—Inodorous, insipid; in the form of a white powder; insoluble in water.

Oper.—Diaphoretic and alterative; in large doses, emetic, purgative.

Use.—In febrile diseases, and every case in which diaphoresis can be useful; and in small doses in cutaneous diseases.

Dose.—Gr.iiij. to gr.v. in pills, combined with opium or camphor, every six or eight hours, diluting freely in the interval.

PULVIS CATĒCHU COMPÖSĪTUS. Compound Powder of Catechu. (*Catechu contriti* unc.iv.; *Kino, Krameriæ Rad., contritor.* āā unc.ij.; *Cinnamomi Cort., Myristicæ, contritor.* āā unc.j. Mix thoroughly, and pass the powder through a sieve.)

Oper.—Astringent and carminative.

Use.—In diarrhœa or mucous discharges.

Dose.—Gr.xx. to gr.xl.

PULVIS CINNAMÖMI COMPÖSĪTUS. Compound Powder of Cinnamon. *Syn. Pulvis Aromaticus.* (*Cinnamomi Corticis, Cardamomi Seminum, Zingiberis, contritorum* sing. unc.j.)

Oper.—Stimulant, carminative.

Use.—In dyspepsia, flatulent colic, diarrhœa.

Dose.—Gr.ij. to gr.x.

Off. Prep.—*Pilula Aloes et Ferri. Pil. Cambogiæ Composita.*

PULVIS CRĒTÆ AROMĀTĪCUS. Aromatic Powder of Chalk. (*Cinnamomi Corticis contriti* unc.iv.; *Myristicæ, Croci contriti*, āā unc.ij.; *Caryophyllorum contritor.* unc.jss.; *Cardamomi Seminum contritor.* unc.j.; *Sacchari Purificati* unc.xxv.; *Cretæ Præparatæ* unc.xj.)

Oper.—Antacid, stomachic, absorbent, astringent.

Use.—In acidity of the stomach, and in diarrhœa.

Dose.—Gr.x. to gr.lx. rubbed up with mucilage and cinnamon water.

PULVIS CRĒTÆ ARĒMATICUS CUM OPĪO. Aromatic Powder of Chalk and Opium. (*Pulveris Cretæ Aromatici* unc.ix $\frac{3}{4}$; *Opii* unc. $\frac{1}{4}$. Mix.) Contains gr.j. of opium in gr.xl.

Oper.—Anodyne, absorbent, astringent.

Use.—In the same cases as the former. As an anodyne to children affected with irritative diarrhœa during dentition.

Dose.—Gr.x. to gr.xl. for adults.

PULVIS ELATĒRINI COMPÖSĪTUS. Compound Powder of Elaterin. (*Elaterini* gr.v.; *Sacchari Lact.* gr.cxcv.)

Oper.—Hydragogue, cathartic.

Use.—In dropsies.

Dose.—Gr.ss. to gr.v.

PULVIS GLYCYRRHĪZÆ COMPÖSĪTUS. Compound Powder of Liquorice. *Syn.* *Pulvis Glycyrrhizæ Compositus cum Sulphure.* (*Sennæ, Glycyrrhizæ Radicis*, āā unc.ij.; *Fœnicul. Fruct.*, *Sulphuris Sublim.*, āā unc.j.; *Sacchari Purif.* unc.vj.)

Oper.—Aperient.

Use.—In all cases requiring a mild aperient.

Dose.—Gr.xxx. to gr.lx.

PULVIS IPECACŪANHÆ COMPÖSĪTUS. Compound Powder of Ipecacuanha. *Syn.* *Dover's Powder.* (*Ipecacuanhæ cont.*, *Opii cont.*, āā unc.ss.; *Potassii Sulphatis cont.* unc.iv. Mix.) Contains gr.j. of opium in gr.x.

Oper.—Narcotic and diaphoretic.

Use.—In rheumatism, dropsy, gout, fevers, dysentery, and diabetes.

Dose.—Gr.v. to gr.xv. in pills or bolus, diluting freely with tepid fluids, but not immediately, as they are apt to produce vomiting.

Off. Prep.—*Pilula Ipecacuanhæ cum Scilla.*

PULVIS JALĀPÆ COMPÖSĪTUS. Compound Powder of Jalap. (*Jalapæ* unc.v.; *Potassii Tartratis Acidæ* unc.ix.; *Zingiberis* unc.j. Rub them well together, and pass through a fine sieve.)

Oper.—Purgative, hydragogue.

Use.—In constipation, particularly of children; in dropsy, and in cardiac affections.

Dose.—Gr.xx. to gr.xl. for adults; gr.vij. to gr.xij. for children.

PULVIS KINO COMPÖSĪTUS. Compound Powder of Kino. (*Kino cont.* unc.ij $\frac{3}{4}$; *Cinnam. cont.* unc.j.; *Opii cont.* unc. $\frac{1}{4}$.) Gr.xx. contain gr.j. of opium.

Oper.—Astringent and sedative.

Use.—In chronic diarrhœa, pyrosis, leucorrhœa, and uterine and intestinal hæmorrhages.

Dose.—Gr.v. to gr.xx. in aqueous fluids.

PULVIS OPÏI COMPÖSÏTUS. Compound Powder of Opium. (*Opii cont.* unc.jss.; *Piperis Nigri cont.* unc.ij.; *Zingiberis cont.* unc.v.; *Carui cont.* unc.vj.; *Tragacanthæ cont.* unc.ss.) Gr.x. contain gr.j. of opium.

Oper.—Narcotic, stimulant.

Use.—In atonic gout, flatulent colic, colliquative diarrhœa; in the chalk mixture.

Dose.—Gr.ij. to gr.v.

Off. Prep.—*Confectio Opii*.

PULVIS RHËI COMPÖSÏTUS. Compound Powder of Rhubarb. *Syn.* Gregory's Powder. (*Rhei Radicis cont.* unc.ij.; *Magnesie Levissimæ cont.* unc.vj.; *Zingiberis cont.* unc.j.)

Prop.—Purgative and antacid.

Use.—In dyspeptic states of the stomach, attended with acid eructations.

Dose.—Gr.xx. to gr.lx.

PULVIS SCAMMÖNI COMPÖSÏTUS. Compound Powder of Scammony. (*Scammonie Resinæ cont.* unc.iv.; *Jalapæ cont.* unc.iiij.; *Zingiberis cont.* unc.j.)

Oper.—Cathartic.

Use.—In dropsy, and in entozoa; and to remove mucous obstructions in children.

Dose.—Gr.x. to gr.xx.

PULVIS TRAGÄCANTHÆ COMPÖSÏTUS. Compound Powder of Tragacanth. (*Tragacanthæ cont.*, *Acaciæ cont.*, *Amyli, sing.* unc.j.; *Sacch. Pur.* unc.iiij.)

Oper.—Demulcent.

Use.—In hectic fever; catarrh attended with tickling cough; combined with nitre, in gonorrhœa and strangury; and with ipecacuanha powder, in dysentery.

Dose.—Gr.xx. to gr.lx. in distilled water, or any bland fluid. Gr.x. render fl.unc.ij. of fluid mucilaginous.

PYRËTHRI RADIX. Pellitory Root. (*Anacyclus Pyrethrum.* N.O. *Compositæ.* Levant. ♂)

Prop.—In pieces about the length and thickness of the little finger, covered with a thick brown bark studded with black shining points. Fracture resinous; internal structure radiated. Inodorous; taste hot and acrid, its acrimony depending on an acrid resin *Pyrethrin*. The dried is more acrid than the recent root.

Oper.—Stimulant, sialagogue.

Use.—In some affections of the head (by exciting a flow of saliva); in strumous swellings of the tonsils; toothache, neuralgia, rheumatism, and paralysis of the mouth and throat. It is also used in infusion as a gargle.

Off. Prep.—*Tinctura Pyrethri*.

PYROXYLIN. Pyroxylin. *Syn.* Gun Cotton. (Prepared by the action of nitric and sulphuric acids on cotton wool.)

Comp.— $C_{12}H_{14}(NO_2)_6O_{10}$.

Prop.—Soluble in a mixture of ether and rectified spirit, and leaves no residue on explosion.

Use.—In the preparation of collodion.

QUASSIÆ LIGNUM. Quassia Wood. (*Picraena excelsa*. N.O. *Simarubaceæ*. Jamaica. 24)

Prop.—Inodorous; taste a very intense, durable bitter; colour whitish yellow; has no astringency; bitter principle (*Quassin*) extracted by water and alcohol.

Oper.—Tonic, stomachic.

Use.—In atonic dyspepsia, as tonic after acute diseases, occasionally as antiperiodic. As enema to destroy threadworms.

Dose.—Employed in the form of the official preparations.

Incomp.—Nitrate of silver, acetate of lead.

Off. Prep.—*Infusum Quassiæ*. *Extractum Quassiæ*. *Tinctura Quassiæ*.

QUERCÛS CORTEX. Oak Bark. The dried bark of the small branches and young stems, collected in spring. (*Quercus robur* (*Q. pedunculata*). N.O. *Cupuliferae*. Britain. 12)

Comp.—Tannin or tannic acid, with, perhaps, a small quantity of gallic acid.

Prop.—In quills; covered with a greyish, shining epidermis; cinnamon-coloured on the inner surface; fibrous; brittle; inodorous; taste very astringent, no marked odour.

Oper.—Tonic, astringent.

Use.—In intermittents, combined with galls, bitters, and aromatics; useful also in form of lotion in leucorrhœa, and as a gargle in relaxed states of the throat. See *Decoction*.

Dose.—Seldom employed except as an external astringent in the form of the decoction.

Off. Prep.—*Decoctum Quercûs*.

QUININÆ HYDROCHLORAS. Hydrochlorate of Quinine. (Obtained in the same way as the sulphate, the separated alkaloid being neutralised by hydrochloric acid.)

Comp.— $C_{20}H_{24}N_2O_2 \cdot HCl, 2H_2O$.

Prop.—Crystals like those of the sulphate, but larger. Soluble in 34 parts of water or 3 of spirit at common temperatures. Solution gives green colour when treated with chlorine water and ammonia; white precipitate with nitrate of silver, insoluble in nitric acid.

Oper. & Use.—The same as the sulphate.

Dose.—Gr.j. to gr.x.

Off. Prep.—*Tinctura Quininæ*.

QUININÆ SULPHAS. Sulphate of Quinine. (The sulphate of an alkaloid prepared from various kinds of cinchona and remijia bark, by extraction with spirit after the addition of lime, or by the action of alkali on an acidulated aqueous infusion, with subsequent neutralisation of the alkaloid by sulphuric acid and purification of the resulting salt.)

Comp.— $((C_{20}H_{24}N_2O_2)_2, H_2SO_4)_2, 15H_2O$.

Prop.—Crystals filiform, silky, snow-white, bitter, inodorous, effloresce in the air. One part requires 700 to 800 parts of cold water for its solution, giving to the water a bluish tint or fluorescent appearance. Soluble in water acidulated with sulphuric acid. The solution gives with chloride of barium a white precipitate insoluble in nitric acid; and when treated first with solution of chlorine, and afterwards

with ammonia, it becomes of a splendid emerald-green colour. If ammonia be added to a solution in acidulated water, quinine is precipitated; entirely redissolved by agitation with fl.unc.ss. of pure ether. 25 gr. of sulphate of quinine yield by a gentle heat 3·8 gr. of water. At a higher temperature it burns without residue. In large doses it produces cinchonism, regarded by some in tropical climates as the proper therapeutic action of the medicine.

Oper.—Tonic, antiperiodic.

Use.—In intermittents; neuralgia; atonic inflammation, as erysipelas; strumous ophthalmia; and debility. It is the best and most certain preparation of bark. Its tendency to produce headache may be counteracted by hydrobromic acid.

Dose.—Gr.j. to gr.x. in any simple bitter infusion. In ague gr.xx. may be given every three or four hours till the temperature falls.

Incomp.—Alkalis and their carbonates, solution of lime, salts of barium, calcium, nitrate of silver, and salts of lead.

Off. Prep.—*Ferri et Quininae Citras.* *Pilula Quininae.* *Vinum Quininae.*

RESĪNA. Resin. (From various species of *Pinus*. The residue after the distillation of turpentine to procure the volatile oil.)

Prop.—Translucent, yellowish, brittle, pulverisable; fracture shining; odour and taste faintly terebinthinate.

Oper.—Stimulant.

Use.—In the composition of plasters and ointments.

Off. Prep.—*Charta Epispastica.* *Emplastrum Cantharidis.* *Emplastrum Calefaciens.* *Emp. Picis.* *Emp. Plumbi Iodidi.* *Emplastrum Resinae.* *Emp. Saponis.* *Unguentum Resinae.* *Unguentum Terebinthinae.*

RHAMNĪ FRANGŪLÆ CORTEX. Frangula Bark. (*Rhamnus Frangula*. N.O. *Rhamnaceae*.)

Comp.—Frangulin, &c.

Prop.—Small quills with greyish or blackish brown corky layer, marked by transverse whitish lenticels; inodorous; taste sweet, slightly bitter.

Oper.—Laxative, tonic.

Use.—In chronic constipation, to increase muscular tone of the intestines and establish regularity.

Off. Prep.—*Extract. Rhamni Frangulae.* *Extract. Rhamni Frangulae Liquidum.*

RHAMNI PURSHĪĀNI CORTEX. Sacred Bark. *Syn.* *Cascara Sagrada.* (*Rhamnus Purshianus*. N.O. *Rhamnaceae*.)

Comp.—Similar to that of *Rhamnus Frangula*.

Prop.—Quills or incurved pieces, externally smooth, greyish-white, and marked with spots or patches of adherent lichens; no marked odour, bitter taste.

Oper. & Use.—Similar to *Rhamnus Frangula*.

Off. Prep.—*Extract. Cascarae Sagradae.* *Extract. Casc. Sagr. Liquidum.*

RHĒI RADIX. Rhubarb Root. (*Rheum palmatum*, *Rheum officinale*, and probably other species. N.O. *Polygonaceae*. China, Thibet, and Tartary. 2) The best comes through Russia in flat perforated pieces.

Comp.—Chrysophanic acid, a glucoside, chrysophane, phaeoretin, oxalate of calcium, tannic acid.

Prop.—Odour aromatic, peculiar, rather nauseous; taste somewhat aromatic, bitterish, astringent; feels gritty between the teeth;

colours the saliva and urine saffron-yellow; not very mucilaginous. Pieces firm, but not flinty; external colour a clear yellow; fracture rugged, veined yellow, red, and white; easily pulverised; forming a powder of a fine bright buff-yellow colour; free from decay, not worn-eaten. Both water and spirit extract its virtues.

Oper.—Purgative, stomachic, astringent.

Use.—In diarrhoea depending upon the ingestion of irritant substances. In atonic dyspepsia. It is a useful adjunct to neutral salts and calomel, rendering their operation more easy. Externally the powder has been sprinkled over ulcers, to assist their granulation and healing.

Dose.—Gr.v. to gr.xx. of the powder to open the bowels; gr.ij. to gr.x. to act as a stomachic.

Off. Prep.—*Extractum Rhei. Infusum Rhei. Pilula Rhei Composita. Pulvis Rhei Compositus. Syrupus Rhei. Tinct. Rhei. Vinum Rhei.*

RHŒADOS PETALA. Petals of the Red Poppy. (*Papaver Rhæas*. N.O. *Papaveraceæ*. Indigenous. ☉)

Use.—Chiefly to impart their fine red colour to syrup.

Off. Prep.—*Syrupus Rhæados.*

RICINI OLĒUM. See *Oleum Ricini*.

ROSÆ CANINÆ FRUCTUS. Fruit of the Dog-Rose or Hips. (*Rosa canina*. N.O. *Rosaceæ*. Indigenous. ♀)

Prop.—An inch or more in length, ovate, scarlet, smooth, shining, inodorous; taste sweet, acidulous, depending on the presence of uncombined citric acid and sugar.

Oper.—Cooling.

Use.—Vide the *Confection*.

Off. Prep.—*Confectio Rosæ Caninæ.*

ROSÆ CENTIFOLIÆ PETĀLA. Cabbage-Rose Petals. (*Rosa centifolia*. N.O. *Rosaceæ*. Britain. ♀)

Prop.—Odour extremely fragrant; taste sweetish and slightly bitter and astringent.

Oper.—Laxative.

Use.—Scarcely used for any purpose except for the distillation of rose-water and the formation of a syrup.

Off. Prep.—*Aqua Rosæ.*

ROSÆ GALLICÆ PETĀLA. Red-Rose Petals. Unexpanded, fresh and dried. (*Rosa gallica*. N.O. *Rosaceæ*. Britain. ♀)

Prop.—Odour fragrant, developed by drying; taste bitterish, astringent.

Oper.—Astringent, tonic.

Use.—See the preparations of it.

Off. Prep.—*Confectio Rosæ Gallicæ. Infusum Rosæ Acidum. Syrupus Rosæ Gallicæ.*

ROSMARINI OLEUM. See *Oleum Rosmarini*.

RUTÆ OLEUM. See *Oleum Rutæ*.

SABĀDILLA. Cevadilla. The dried ripe seeds. (*Schænocaulon officinale* (*Asagraea officinale*). N.O. *Melanthaceæ*. Vera Cruz, Mexico.)

Prop.—Seeds about $\frac{1}{4}$ in. long, fusiform, prolonged above into a membranous wing; inodorous; taste bitter, acrid. Sometimes imported in or with pericarps, which should be rejected.

Comp.—Veratrine, sabadilline, and sabatrine.

Oper.—Purgative, emetic, vascular depressant.

Use.—To lower temperature and pulse in erysipelas and pneumonia; also in acute rheumatism and gout; seldom in England; used in the form of powder to destroy pediculi.

Off. Prep.—*Veratrina*.

SABINÆ CACŪMĪNA. Savin Tops. (*Juniperus Sabina*. N.O. *Coniferae* or *Pinaceae*. Britain. $\mathcal{L}$)

Prop.—Twigs densely covered with minute imbricated adpressed leaves in four rows. Odour strong, disagreeable; taste hot, acrid, bitter; depending on an essential oil.

Oper.—Emmenagogue, anthelmintic, irritant.

Use.—In amenorrhœa, but should be cautiously administered, as in large doses it causes abortion. Externally the ointment is used to promote discharge from blistered surfaces.

Dose.—Gr. iv. to gr. x. of the powder.

Off. Prep.—*Oleum Sabinæ*. *Tinctura Sabinæ*. *Unguentum Sabinæ*.

SABINÆ OLĒUM. See *Oleum Sabinæ*.

SACCHĀRUM LACTIS. Sugar of Milk. (Obtained by evaporation of the whey of milk.)

Comp.— $C_{12}H_{22}O_{11}, H_2O$.

Prop.—In cylindrical masses, crystallised on cord or wood; greyish-white, translucent, hard; slightly sweetish; soluble in six times its weight of water, but not in alcohol or ether.

Oper.—Laxative, nutritive.

Use.—In the preparation of medicines, especially powders.

Off. Prep.—*Pulvis Elaterini Compositus*.

SACCHĀRUM PURIFICĀTUM. Refined Sugar. *Syn.* Sucrose.

Comp.— $C_{12}H_{22}O_{11}$.

Prop.—White, crystalline; readily soluble forming syrup, which gives no red or yellowish precipitate when boiled with sulphate of copper and excess of potash, showing freedom from admixture with grape sugar.

Oper.—Nutritive, demulcent.

Use.—Seldom given internally with a medical intention, unless to conceal the unpleasant taste of some medicines.

Off. Prep.—*Confectio Rosæ Caninæ*. *Conf. Rosæ Gallicæ*. *Conf. Sennæ*. *Extract. Sarsæ Liq.* *Ferri Carbonas Saccharata*. *Liq. Calcis Saccharatus*. *Mist. Ferri Comp.* *Mist. Guaiaci*. *Mist. Spir. Vini Gallici*. *Pilula Ferri Iodidi*. *Pulvis Amygdalæ Comp.* *Pulv. Cretæ Aromaticus*. *Pulv. Glycyrrhizæ Comp.* *Pulv. Tragacanthæ Comp.* *Sodii Citro-tartras Efferv.* *Syrupi et Trochisci omnes*.

SALICINUM. Salicin. (Crystalline glucoside from *Salix alba* and other species of *Salix*, and from various species of *Populus*. N.O. *Salicaceae*.)

Comp.— $C_{13}H_{18}O_7$.

Prop.—Shining crystals, very bitter, soluble in water and alcohol, insoluble in ether. Reddened by sulphuric acid. Heated with red chromate of potassium and dilute sulphuric acid, the odour of meadow-sweet is evolved.

Oper.—Tonic, antirheumatic, antipyretic.

Use.—In acute rheumatism, in pyæmia, septicæmia, puerperal fever, and diphtheria.

Dose.—Gr.ij. to gr.xx.

SAMBŪCI FLŌRES. Elder Flowers. (*Sambucus nigra*. N.O. *Caprifoliaceæ*. Indigenous. $\frac{1}{2}$)

Prop.—Flowers small, white; crowded in large corymbose cymes. Odour of the flowers sickly; of the fruit the same, but weaker; bark inodorous; taste of the flowers bitterish.

Oper.—Diaphoretic, stimulant.

Use.—The flowers in fomentations, to yield their flavour to water in distillation, and to form a cooling ointment; elder-flower water forms an agreeable vehicle for the administration of other medicines.

Off. Prep.—*Aqua Sambuci*.

SANTONĪCA. Santonica. The unexpanded flower heads. (*Artemisia maritima*, var. *Stechmanniana*. N.O. *Compositæ*. Russia. $\frac{1}{4}$)

Comp.—Santonin, and traces of volatile oil.

Prop.—The flower heads resemble seeds, about one line in length, fusiform, blunt at the ends; greenish-brown, smooth, consist of imbricated involucre scales with green midrib; odour strong, and somewhat camphoraceous; taste bitter, camphoraceous.

Oper. & Use.—See *Santoninum*.

Dose.—Gr.x. to gr.lx.

SANTONĪNUM. Santonin. A crystalline neutral principle obtained from santonica.

Comp.— $C_{15}H_{18}O_3$.

Prop.—Colourless flat rhombic prisms, slightly bitter, inodorous, fusible, sublimable by a moderate heat; scarcely soluble in cold, sparingly in boiling water, but abundantly so in chloroform, rectified spirit, and ether. It is converted into succinic acid by nitric acid. Sunlight renders it yellow. With free access of air it burns without residue.

Oper.—Anthelmintic.

Use.—To remove the round worm or lumbricus.

Dose.—Gr.ss. to gr.ij. for a child; gr.ij. to gr.vj. for an adult.

Off. Prep.—*Trochisci Santonini*.

SAPO ANĪMĀLIS. Curd Soap. Made of soda and purified animal fat, principally of stearin.

Prop.—White or very light greyish tint, dry, nearly inodorous, pulverisable when kept in a warm dry air, easily moulded when warm. Soluble in rectified spirit and in hot water. The solution is neutral or slightly alkaline. It does not impart a greasy stain to paper.

Use.—For its physical properties.

Off. Prep.—*Empl. Resinæ*. *Empl. Saponis*. *Empl. Saponis Fuscum*. *Extr. Colocynth. Comp.* *Liniment. Potassii Iodidi cum Sapone*. *Pilula Phosphori*. *Pil. Scammonii Comp.* *Suppos. Acid. Carbol. c. Sapone*. *Suppos. Acidi Tannici c. Sapone*. *Suppos. Morphinæ cum Sapone*.

SAPO DURUS. Hard Soap. *Syn.* White Castile Soap. Made with olive oil and soda.

Prop.—Greyish-white, dry, inodorous; horny and pulverisable when kept dry and warm; easily moulded when heated; imparts no oily stain to paper; taste alkalescent, nauseous; soluble in water and in alcohol.

Use.—Externally for bruises and sprains. More employed as a convenient basis for pills.

Dose.—Gr.v. to gr.xxx. in pills.

Incomp.—Acids, earths, metallic salts, and alum; astringent vegetables and hard water decompose solutions of soap.

Off. Prep.—*Liniment. Saponis. Pil. Aloes Barbad. Pil. Aloes et Asa-fetidæ. Pil. Aloes Soc. Pil. Cambogiæ Comp. Pil. Rhei Comp. Pil. Saponis Comp. Pil. Scillæ Comp.*

SAPO MOLLIS. Soft Soap. Soap made with olive oil and potash.

Prop.—Yellowish-green, inodorous, gelatinous. Soluble in rectified spirit. Imparts no oily stain to paper.

Off. Prep.—*Linimentum Terebinthinæ.*

SARSÆ RADIX. Jamaica Sarsaparilla. (*Smilax officinalis*. N.O. *Smilacæ*. Jamaica. H)

Comp.—A volatile oil lost in drying, smilacin, a white crystallisable substance obtained from the bark, and starch.

Prop.—Roots not thicker than a goosequill, generally many feet in length; reddish-brown, covered with rootlets, and folded in bundles about 18 inches long. Inodorous; taste bitterish, mucilaginous; fibrous, of a brownish colour externally, white within.

Oper.—Diaphoretic, diuretic, demulcent.

Use.—In the sequelæ of syphilis, when, after a mercurial course, nocturnal pains, enlargements of the joints, and cutaneous ulcerations remain; in scrofula; elephantiasis, or cutaneous affections resembling it; chronic rheumatism. Of doubtful value.

Dose.—Gr.xx. to gr.lx. of the powder.

Off. Prep.—*Decoctum Sarsæ. Decoctum Sarsæ Comp. Extractum Sarsæ Liquidum.*

SASSÁFRAS RADIX. Sassafras Root, dried. (*Sassafras officinale*. N.O. *Lauracæ*. North America. L)

Prop.—In branched pieces, sometimes 8 inches in diameter at the crown; bark externally greyish-brown, internally rusty-brown; odour not unlike that of fennel; taste aromatic, subacid, sweetish; depending on a volatile oil.

Oper.—Stimulant, sudorific, diuretic.

Use.—In cutaneous diseases; chronic rheumatism; and as an adjunct to the decoctions of guaiacum, &c.

Off. Prep.—*Decoctum Sarsæ Compositum.*

SCAMMŌNĬÆ RADIX. Scammony Root dried. See *Scammonium*.

Prop.—Unbranched, cylindrical, shrivelled, longitudinally furrowed. Odour and taste faint, somewhat like jalap.

Off. Prep.—*Scammoniacæ Resina.*

SCAMMŌNĬÆ RESĪNA. Resin of Scammony. (Obtained by means of rectified spirit from scammony root or scammony.)

Prop.—In brownish translucent pieces, brittle, fracture resinous, odour fragrant. It cannot form singly an emulsion with water. Its tincture does not render fresh cut surface of potato blue. Soluble in ether.

Oper.—Drastic, hydragogue, cathartic.

Use.—In obstinate constipation, worms, dropsy.

Dose.—Gr.ij. to gr.vij.

Off. Prep.—*Confectio Scammonii. Extract. Colocynth. Comp. Pil. Colocynth. Comp. Pil. Scammonii Comp. Pulvis Scammonii Comp.*

SCAMMŌNIUM. Scammony. (Gum-resin obtained from *Convolvulus Scammonia*. N.O. *Convolvulaceæ*. Mexico. 12.) The best comes from Aleppo.)

Prop.—Odour trifling, but unpleasant; taste bitter, acrid; in blackish-grey fragments, becoming whitish-yellow when touched with wet fingers; porous, fragile; fracture shining. No bubbles are given off when hydrochloric acid is dropped on it: a cooled decoction is not rendered blue by solution of iodine. 75 per cent. ought to be dissolved in ether.

Comp.—Resin 75, gummy extract 25.

Oper.—Drastic, hydragogue, cathartic.

Use.—In obstinate constipation, worms, dropsy.

Dose.—Gr.v. to gr.x. triturated with sugar, or with almonds.

Off. Prep.—*Mistura Scammonii*. *Resina Scammonii*.

SCILLA. Squill. The bulb, divested of its dry membranous outer scales, sliced and dried. (*Urginea Scilla*. N.O. *Liliaceæ*. Mediterranean coasts. 2f)

Prop.—Inodorous; taste bitter, nauseous, extremely acrid. The dried slices are flattish or somewhat four-sided; white, or yellowish-white, slightly transparent when dry, brittle and easily pulverisable, but recovering moisture on exposure.

Comp.—An acrid resin, a bitter principle, scillitoxin, with sugar, mucilage, &c.

Oper.—Emetic in large doses and purgative; in small doses expectorant and diuretic.

Use.—In pulmonary complaints, after the inflammatory action is reduced; pertussis; in dropsy, and more useful if given with a mercurial, or with digitalis.

Dose.—Gr.j. to gr.iiij. of the dried root, powdered, and united with nitre or ipecacuanha; or in pills, to produce diuresis, united with the blue pill.

Incomp.—Gelatin, lime-water, alkaline carbonates, acetates of lead, nitrate of silver.

Off. Prep.—*Acetum Scillæ*. *Oxymel Scillæ*. *Pil. Ipecacuanhæ cum Scilla*. *Pilula Scillæ Comp.* *Syrupus Scillæ*. *Tinct. Scillæ*.

* * * To dry the squill it should be cut transversely, the rind taken off, and exposed to heat, gentle at first, but afterwards slowly increased to 150° F. (65°-5 C.)

SCOPĀRII CACŪMĪNA. Broom tops, fresh and dried. (*Cytisus scoparius* (*Sarothamnus scoparius*). N.O. *Leguminosæ*. Indigenous. 12)

Prop.—Almost inodorous when dry; taste bitter. Branched, with five wing-like angles, dark green, nearly smooth, tough.

Comp.—A neutral principle, scoparin; a viscid oil, sparteine; also extractive matters and salts.

Oper.—Diuretic.

Use.—In dropsies.

Off. Prep.—*Decoctum Scoparii*. *Succus Scoparii*.

SENĒGÆ RADIX. Senega Root Dried. (*Polygala Senega*. N.O. *Polygalaceæ*. North America. 2f) The bark is the active part of the root.

Comp.—Polygalic acid, the active principle, residing in the bark, and soluble to a great extent in hot water; also tannin, pectin, gum, &c.

Prop.—A knotty root-stock, with a branched tap-root of about the

thickness of a quill, twisted and keeled; bark yellowish-brown; inodorous; taste sweetish at first, then acrid, hot, and pungent.

Oper.—Stimulant expectorant, diaphoretic, diuretic.

Use.—In pneumonia, after the inflammatory action is reduced; chronic bronchitis and chronic rheumatism; dropsy; croup? Often given with carbonate of ammonium, and with other expectorants and diuretics.

Dose.—Gr.xx. to gr.lx. of the powder.

Off. Prep.—*Infusum Senegæ. Tinctura Senegæ.*

SENNA ALEXANDRINA, ET INDICA. Alexandrian and East Indian or Tinnivelly Senna. (*a. Cassia acutifolia* (*Cassia lanceolata*). *β. Cassia angustifolia* (*Cassia elongata*). N.O. *Leguminosæ. a. Alexandria. β. Southern India.* ☉)

Prop.—*a.* Leaflets lanceolate or obovate, about an inch long, unequally oblique at the base, brittle, greyish-green; odour faint; taste mucilaginous, nauseous and sickly. The unequally oblique base and freedom from bitterness distinguish the senna from the argel leaves, which moreover are thicker and stiffer. Active part extracted by alcohol, and by water. *β.* About 2 inches long, lanceolate, acute, unequally oblique at the base, flexible, entire, green, without any admixture; in odour and taste resembling the Alexandrian variety.

Comp.—Cathartin, extractive, volatile oil, and several salts.

Oper.—Hydragogue, cathartic. (It is apt to gripe.)

Use.—In habitual or occasional constipation and dropsy.

Dose.—Of the powder gr.xx. to gr.lx. rubbed with crystals of acid tartrate of potassium, and united with ginger to prevent griping; but the best form is that of infusion.

Adulterations.—Leaves of *Solenostemma Argel.* The leaves of box and *Colutea arborescens* and *Tephrosia apollinea.*

Off. Prep.—*Confectio Sennæ. Infusum Sennæ. Mistura Sennæ Composita. Pulvis Glycyrrhizæ Compositus. Tinct. Sennæ. Syrupus Sennæ.*

SERPENTARIÆ RHIZOMA. Serpentry Rhizome. The dried rhizome and rootlets. (*Aristolochia Serpentaria.* N.O. *Aristolochiaceæ.* North America. ♀)

Prop.—A small roundish rhizome, with a tuft of numerous slender rootlets, about 3 inches long, yellowish; odour aromatic, similar to that of valerian; taste pungent, bitter; fibrous; its active part extracted partially only by water, altogether by proof spirit.

Oper.—Stimulant, diaphoretic, diuretic.

Use.—In typhoid fever, and diseases of debility; to assist cinchona in the cure of intermittents; in the exanthemata, and dyspepsia; and externally as a gargle in cynanche maligna.

Dose.—Of the powder gr.x. to gr.xxx.; of the infusion fl.unc.j. every four hours.

Off. Prep.—*Infusum Serpentariæ. Tinctura Cinchonæ Comp. Tinct. Serpentariæ.*

SEVUM PRÆPARĀTUM. Prepared Suet; Mutton Suet. (*Ovis Aries*, the sheep. Cl. *Mammalia*, Ord. *Ruminantia*.) (Cut the suet in pieces, melt it over a slow fire, and strain it through linen.)

Comp.—Stearin, olein, and a small quantity of margarin.

Prop.—White, smooth, almost scentless, fusible at 103° F. (39° C.)

Oper.—Emollient, nutritive.

Use.—It is sometimes boiled in milk, in the proportion of unc.j. to Oj.

of milk, and a cupful given occasionally in chronic diarrhœa; but its principal use is to give consistence to ointments and plasters.
Off. Prep.—*Emplastrum Cantharidis*. *Unguentum Hydrargyri*.

SINĀPIS. Mustard. (Black and white mustard seeds powdered and mixed.)

Comp.—Sulpho-sinapisin, a volatile, crystallisable substance; a fixed oil; myrosin and myronic acid; the two latter under the influence of heat and moisture react on each other, producing a pungent volatile oil.

Prop.—Inodorous when dry, but the odour developed by water is very pungent; taste bitterish, acrid; properties yielded to water. There is no blue colour on the addition of tincture of iodine to the cooled decoction.

Oper.—Stimulant, diuretic, emetic, rubefacient.

Use.—In dyspepsia. A strong infusion is used to produce vomiting in narcotic poisoning; externally the flour is applied as a cataplasin to the chest in pulmonary affections, to the heart in painful palpitation, to the side in hysterical pain, to the legs and the soles of the feet in comatose affections.

Dose.—Gr.xx. to gr.xxx.

Off. Prep.—*Cataplasma Sinapis*. *Charta Epispastica*. *Oleum Sinapis*.

SINĀPIS ALBÆ SEMINA. White Mustard Seeds. (*Brassica alba* (*Sinapis alba*). N.O. *Cruciferæ*.)

Off. Prep.—*Sinapis*.

SINĀPIS NIGRÆ SEMINA. Black Mustard Seeds. (*Brassica nigra* (*Sinapis nigra*). N.O. *Cruciferæ*.)

Off. Prep.—*Sinapis*.

SODA CAUSTICA. Caustic Soda. (Obtained by the evaporation of Liquor Sodæ.)

Comp.—Hydrate of sodium. NaHO .

Prop.—Greyish-white fragments, alkaline and corrosive; burns with yellow flame; and nitrate of silver and chloride of barium throw down a scanty white precipitate from the aqueous solution acidulated with nitric acid. 900 grain-measures of the volumetric solution of oxalic acid will neutralise 40 grs. of caustic soda in solution.

Oper.—Escharotic.

Use.—For forming issues, and in cases where an escharotic may be required.

SODA TARTARĀTA. Tartarated Soda. *Syn.* Sodæ et Potassæ Tartras; Sodæ Potassio-Tartras. (*Sodii Carbonatis* unc.xij. vel q.s.; *Potassii Tartratis Acidæ* unc.xvj. vel q.s.; *Aquæ Destill. ferr.* Oiv. Add the tartrate gradually to the solution of the carbonate. When the solution is neutral, boil, filter, and crystallise. The basic equivalent of water is replaced by one of soda, and carbonic acid given off.)

Comp.— $\text{NaKC}_4\text{H}_4\text{O}_6, 4\text{H}_2\text{O}$.

Prop.—Inodorous; taste salt, bitter; crystals generally eight-sided prisms, the ends truncated at right angles; efflorescent; soluble in water; neutral; sulphuric acid precipitates acid tartrate of potassium. The precipitates with nitrate of silver and chloride of barium are soluble in water. Treated with sulphuric acid it blackens and evolves inflammable gas.

Oper.—Mild laxative.

Use.—In constipation; well suited for cases of jaundice, calculus, and puerperal febrile conditions.

Dose.—Unc. $\frac{1}{4}$ to unc. $\frac{1}{2}$.

Incomp.—Mineral acids; acidulous salts except acid tartrate of potassium; chloride of calcium; salts of lead.

SODII ACETAS. Acetate of Sodium. (Appendix, B.P.)

Comp.— $\text{NaC}_2\text{H}_3\text{O}_2 \cdot 3\text{H}_2\text{O}$.

Prop.—Transparent colourless crystals; taste sharp, bitterish; soluble; neutral; the solution when diluted is not precipitated by chloride of barium or nitrate of silver.

Use.—In the preparation of the test solution employed in testing phosphate of calcium; also in the preparation of acetic ether.

SODII ARSENIAS. Arseniate of Sodium. (*Acidi Arseniosi* unc. x.; *Sodii Nitratis* unc. viijss.; *Sodii Carbonatis Exsic.* unc. vss.; *Aquæ Destillatæ ferventis* fl. unc. xxxv. Expose the dry ingredients finely powdered to a full red heat till fusion has taken place, and while still warm dissolve in the water and crystallise.)

Comp.— $\text{Na}_2\text{HAsO}_4 \cdot 7\text{H}_2\text{O}$ and $\text{Na}_2\text{HAsO}_4 \cdot 12\text{H}_2\text{O}$.

Prop.—Colourless transparent prisms, soluble in water. The chlorides of barium and calcium, and sulphate of zinc, throw down white precipitates, and the nitrate of silver a red, from the solution, soluble in nitric acid. The precipitate with silver is also soluble in excess of ammonia. Freshly prepared it has the formula $\text{Na}_2\text{HAsO}_4 \cdot 12\text{H}_2\text{O}$; this salt loses 53.73 per cent. of its weight when dried at 300° F. (148° 9 C.) When exposed, moisture escapes, and the formula becomes $\text{Na}_2\text{HAsO}_4 \cdot 7\text{H}_2\text{O}$.

Oper.—Similar to Liquor Arsenicalis, but milder.

Use.—The same as Liquor Arsenicalis, and for making Liquor Sodii Arseniatis.

Dose.—Gr. $\frac{1}{16}$ th to $\frac{1}{8}$ th.

SODII BICARBONAS. Bicarbonate of Sodium. (Prepared from the carbonate, as the bicarbonate from the carbonate of potassium.)

Comp.— NaHCO_3 .

Prop.—In minute crystals; less alkaline to the taste than the carbonate. Soluble in water, gives a slight brown to turmeric. Dissolved in hydrochloric acid it forms a solution which is not precipitated by perchloride of platinum. The precipitate with chloride of barium is soluble in hydrochloric acid. The solution in cold water gives a white and not a coloured precipitate with perchloride of mercury. It colours flame yellow. 84 grains at a red heat leave 53 of alkaline residue, requiring for neutralisation 1,000 measures of the volumetric solution of oxalic acid. 20 grains of the bicarbonate will neutralise 16.7 grains of citric acid, and 17.8 of tartaric acid.

Prop. & Use.—The same as those of the carbonate.

Dose.—Gr. x. to gr. lx.

Off. Prep.—*Liquor Sodæ Effervescens*, *Sodii Citro-tartras Effervescens*, *Trochisci Sodii Bicarbonatis*.

SODII BROMIDUM. Bromide of Sodium. (Obtained in the same way as bromide of potassium with substitution of solution of soda for solution of potash.)

Comp.— NaBr .

Prop.—Small monoclinic crystals, deliquescent, inodorous, saline taste. Readily soluble in water.

Oper.—Sedative.

Use.—As bromide of potassium.

Dose.—Gr.x. to gr.xxx.

SODII CARBONAS. Carbonate of Sodium. (Obtained from chloride of sodium, either by reaction with bicarbonate of ammonium and subsequent ignition, or by conversion into sulphate and action of heat on a mixture of this with carbon and carbonate of calcium.)

Comp.— $\text{Na}_2\text{CO}_3, 10\text{H}_2\text{O}$.

Prop.—Colourless, transparent laminar rhombic crystals, efflorescent, soluble in water; renders turmeric brown; it imparts a yellow colour to flame, and dissolves with effervescence in diluted hydrochloric acid, forming a solution which does not precipitate with perchloride of platinum. By heat it undergoes aqueous fusion, and then loses 63 per cent. of its weight. Inodorous; taste alkaline, harsh. 143 grains require for neutralisation at least 960 grain-measures of the volumetric solution of oxalic acid. 20 grains of the carbonate will neutralise 9·8 grains of citric, and 10·5 grains of tartaric acid.

Oper.—Antacid, lithontriptic.

Use.—In dyspepsia, and acidity of the stomach, united with bitters; also in gout, and the uric acid diathesis.

Dose.—Gr.v. to gr.xxx. twice or thrice a day.

Incomp.—Lime; acids, unless as an effervescing draught; hydrochlorate of ammonium, earthy and metallic salts.

Off. Prep.—*Liquor Sodæ. Liquor Sodæ Chlorinata. Soda Tartarata. Sodii Arsenias. Sodii Bicarbonas. Sodii Carbonas Ersiccata. Magnesii Carbonas Levis. Magnesii Carbonas Ponderosa. Sodii Phosphas.*

SODII CARBONAS EXSICCATA. Dried Carbonate of Sodium. (The carbonate heated until vapours cease to be given off, and then reduced to powder.)

Comp.— Na_2CO_3 .

Oper.—Antacid, lithontriptic.

Use.—In acidity of the stomach; but chiefly in renal calculus and other affections of the urinary organs.

Dose.—Gr.iiij. to gr.x. made into pills, with some aromatic powder and soap.

SODII CHLORIDUM. Chloride of Sodium, Common Salt.

Comp.— NaCl .

Use.—Occasionally as an emetic, also in the preparation of *Acidum Hydrochloricum, Hydrargyri Perchloridum, Hydrargyri Subchloridum.*

SODII CITRO-TARTRAS EFFERVESCENS. Effervescent Citro-Tartrate of Sodium. (*Sodii Bicarbonatis contritæ* unc.xvij.; *Acidi Tartarici contriti* unc.ix.; *Acidi Citrici* unc.vj.; *Sacch. Purif.* unc.v. Heat the powders, thoroughly mixed, to between 200° and 220° F. (93°·3 and 104°·4 C.), and when the particles begin to aggregate, stir them assiduously until they assume the granular form, and pass through suitable sieves.)

Oper.—Antacid, diuretic, refrigerant, mild purgative.

Use.—In pyrexia, and certain forms of dyspepsia.

Dose.—Gr.lx. to unc.‡.

SODII HYPOPHOSPHIS. Hypophosphite of Sodium. (Obtained by adding carbonate of sodium to a solution of hypophosphite of

calcium, as long as a precipitate of carbonate of calcium is formed, and then filtering and evaporating.)

Comp.— NaPH_2O_2 .

Prop.—White, granular, taste bitter, deliquescent, soluble in water and spirit, but insoluble in ether. At a red heat it ignites, emitting spontaneously inflammable phosphuretted hydrogen.

Oper.—Tonic, refrigerant, and alterative.

Use.—In phthisis, to supply the waste of phosphorus in the system; but never to be used in the acute or any inflammatory disease of the lungs. Opposite opinions are held as to its efficacy in phthisis.

Dose.—Gr.v. to gr.x.; to be given in half a tumbler of milk or water at breakfast time.

SODII IODIDUM. Iodide of Sodium. (Prepared like iodide of potassium, with substitution of solution of soda for solution of potash.)

Comp.— NaI .

Prop.—White crystalline powder, taste saline, bitter; readily soluble in water and spirit. With nitrate of silver it gives a yellowish-white precipitate. 10 grains require for complete precipitation 660 grain-measures of the volumetric solution of nitrate of silver.

Oper. & Use.—Similar to iodide of potassium, but less irritant.

Dose.—Gr.iiij. to gr.x.

SODII NITRAS. Nitrate of Sodium. A native salt, purified by crystallisation.

Comp.— NaNO_3 .

Prop.—Colourless, obtuse, rhombohedral crystals, having a cooling saline taste; deflagrates; warmed in a test-tube with sulphuric acid and copper wire it evolves ruddy fumes; deliquescent, soluble in water; the nitrate of silver and chloride of barium, on being added to the solution, cause only a faint precipitate.

Use.—For making the arseniate of sodium.

SODII PHOSPHAS. Phosphate of Sodium. (Prepared by adding solution of carbonate of sodium to a solution of acid phosphate of calcium, obtained from a mixture of bone-ash and sulphuric acid.)

Comp.— $\text{Na}_2\text{HPO}_4, 12\text{H}_2\text{O}$.

Prop.—Inodorous; taste nearly that of common salt; crystals transparent, colourless rhomboidal prisms; efflorescent; soluble in three parts of water at 60°F . (15°C .) Colour turmeric brown. Nitrate of silver throws down a yellow precipitate, soluble in nitric acid. 100 grains at red heat lose 63 grains of water. Chloride of barium added to the residue throws down a white precipitate, soluble in dilute nitric acid. It burns with a yellow flame.

Oper.—Mild laxative, and diuretic.

Use.—In all cases where the bowels require to be opened. When dissolved in broth made without salt, the taste of the phosphate is not perceived.

Dose.—As a purgative $\text{unc.}\frac{1}{4}$ to $\text{unc.}\text{j.}$; as a diuretic gr.xxx. to gr.cxx.

Incomp.—Mineral acids, solution of lime, magnesia, chloride of barium, nitrate of silver, and acetate of lead.

Off. Prep.—*Ferri Phosphas. Syrupus Ferri Phosphatis.*

SODII SALICYLAS. Salicylate of Sodium. (By action of salicylic acid on carbonate of sodium or on caustic soda.)

Comp.— $(\text{NaC}_7\text{H}_5\text{O}_3)_2, \text{H}_2\text{O}$.

Prop.—Inodorous, sweetish saline salts; colourless, or nearly colour-

less crystals. Soluble in water, giving neutral or faintly acid reaction. Perchloride of iron gives a reddish-brown colour with a concentrated solution, violet with a dilute solution. Dissolves without coloration in sulphuric acid.

Oper. & Use.—The same as salicin.

Dose.—Gr.x. to gr.xxx.

SODII SULPHAS. Sulphate of Sodium, or Glauber's Salts. (From the salt which remains after the distillation of hydrochloric acid, the superabundant acid being neutralised with carbonate of sodium.)

Comp.— $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$.

Prop.—Inodorous; taste strongly saline, and bitter; crystals oblique prisms; efflorescent; insoluble in spirit; soluble in water. Neutral reaction. Nitrate of silver throws down scarcely any precipitate. 100 grains lose 55.9 of water at a red heat. Moreover, from 100 grains dissolved in distilled water, and acidulated with hydrochloric acid, 72.2 grains of sulphate of barium are obtained upon the addition of chloride of barium, and the application of heat.

Oper.—Purgative; in small doses diuretic.

Use.—In constipation, the most generally employed purgative in fevers and inflammatory affections.

Dose.—Unc. $\frac{1}{4}$ to unc. j.

Incomp.—Carbonate of potassium, chlorides of calcium and barium, salts of lead and of silver.

SODII SULPHIS. Sulphite of Sodium. (By action of sulphurous acid on carbonate of sodium or on caustic soda.)

Comp.— $\text{Na}_2\text{SO}_3 \cdot 7\text{H}_2\text{O}$.

Prop.—Colourless prisms, efflorescent, taste saline and sulphurous, no odour.

Oper.—Antiseptic.

Use.—In chronic vomiting with sarcinæ, also in typhoid fever, and to check decomposition of urine.

Dose.—Gr.v. to gr.xx.

SODII SULPHOCARBOLAS. Sulphocarbolate of Sodium. (Obtained by dissolving carbolic acid in sulphuric acid, adding carbonate of barium, filtering, precipitating the filtrate with carbonate of sodium, and evaporating the clear solution after separation of the precipitate.)

Comp.— $\text{NaC}_6\text{H}_5\text{SO}_4 \cdot 2\text{H}_2\text{O}$.

Prop.—Taste saline, bitter; nearly inodorous; soluble in water, the dilute solution changed to violet by perchloride of iron.

Oper.—Antiseptic.

Use.—In pyæmia, septicæmia, and continued fevers.

Dose.—Gr.x. to gr.xv.

SODII VALERIĀNAS. Valerianate of Sodium. (*Liquoris Sodæ* q.s.; *Alcoholis Amylici* fl.unc.iv.; *Potassii Bichrom.* unc.ix.; *Acidi Sulphurici* fl.unc.vjss.; *Aquæ Destillatæ* cong.ss. Dilute the oil of vitriol with fl.unc.x., and dissolve with the aid of heat the bichromate of potassium in the remainder of the water. Place the solutions, when cooled to nearly the temperature of the atmosphere, in a retort or flask; add the amylic alcohol; mix well by repeated shaking, until the temperature of the mixture has fallen to 90° F. (32° C.), connect with a condenser, and distil over about half a gallon of liquid. Saturate with the solution of caustic soda, remove the oil on the sur-

face, and evaporate until aqueous vapour ceases to escape. Raise the heat to liquefy the salt, and when the valerianate of sodium has concreted, divide into fragments, and preserve in a well-stoppered bottle.)

Comp.— $\text{NaC}_5\text{H}_9\text{O}_2$.

Prop.—Generally obtained in white fragments, soluble in rectified spirit, with a feeble odour of valerian, and a mawkish taste, becoming pasty on exposure to the air. It has no alkaline reaction. It gives out a powerful odour of valerian on the addition of diluted sulphuric acid.

Oper.—Stimulant and antispasmodic. The salts of valerianic acid are more certain in their operation than the preparations of the herb itself.

Use.—In cases requiring valerian, but principally used in the preparation of valerianate of zinc.

Dose.—Gr. j. to gr. v.

Incomp.—Alkalis, earthy and metallic oxides, and salts of iron.

Off. Prep.—*Zinci Valerianas*.

SODIUM. Sodium. (The metal preserved in mineral naphtha.)

Use.—In the preparation of the solution of ethylate of sodium.

*** *The following are test solutions from the Appendix B.P.*

SOLUTIO ACIDI BORICI. Solution of Boric Acid. (*Acidi Borici* gr. i.; *Spirit. Rectif.* fl.unc. j.)

Use.—As a test to detect the presence of turmeric in rhubarb.

SOLUTIO ACIDI TARTARICI. Solution of Tartaric Acid. (*Acidi Tartarici* unc. j.; *Aquæ Destill.* fl.unc. viij.; *Spirit. Rectif.* fl.unc. ij.)

Use.—As a test to detect the presence of potash; and as a means of preventing the precipitation of oxide of antimony when an acid solution of the metal is added to water.

SOLUTIO ALBUMINIS. Solution of Albumen. (White of one egg mixed with four fluid ounces of distilled water and filtered through clean tow.) This solution must be recently prepared.

Use.—As a test for phosphoric acid and creasote, being coagulated by the latter, but not affected by the (tribasic) phosphoric acid.

SOLUTIO AMMŌNII CARBONATIS. Solution of Carbonate of Ammonium. (*Ammonii Carbonatis* unc. ss.; *Liq. Ammon.* fl.unc. ʒ; *Aquæ Destill.* fl.unc. x.)

Use.—As a test for the carbonate and oxide of zinc.

SOLUTIO AMMŌNII CHLORIDI. Solution of Chloride of Ammonium. (*Ammonii Chloridi* unc. j.; *Aquæ Destill.* fl.unc. x.)

Use.—As a test for magnesia, the carbonate and sulphate of magnesium, and chloride of sodium.

SOLUTIO AMMŌNII OXALATIS. Solution of Oxalate of Ammonium. (*Ammonii Oxalatis* unc. ss.; *Aquæ Destill. fervent.* Oj.)

Use.—As a test for the presence of lime.

SOLUTIO AMMŌNII SULPHYDRATIS. Solution of Sulphydrate of Ammonium. (Prepared by saturating solution of ammonia with sulphuretted hydrogen.)

Use.—As a test to detect the presence of various metals, to distinguish the neutral salts of antimony from those of arsenic, giving rise with the former to an orange-red precipitate, soluble in excess, while there is no precipitate with the latter. Salts of mercury, silver, lead, copper, bismuth, tin, gold, and platinum, give rise to brown or

black precipitates. Those from the protoxide of tin and peroxide of gold and platinum are soluble in excess of the reagent; that from tin requires a large excess.

SOLŪTIO ARGENTI AMMŌNĪO-NITRĀTIS. Solution of Ammonio-Nitrate of Silver. (*Argenti Nitratis* unc. $\frac{1}{4}$; *Liq. Ammon.* fl.unc.ss. vel q.s.; *Aquæ Destill.* q.s. Ammonia is added to solution of nitrate of silver in 8 fl. oz. of water, until the precipitate first formed is nearly dissolved. The solution is filtered and the bulk made up to 13 fl. oz. by addition of distilled water.)

Use.—As a test for arsenious and phosphoric acids, giving a yellow precipitate of arsenite and phosphite of silver, soluble in ammonia and nitric acid.

SOLŪTIO AURI PERCHLORĪDI. Solution of Perchloride of Gold. (*Auri puri* gr.lx.; *Acidi Nitrici* fl.dr.jss.; *Acidi Hydrochlorici* fl.dr.vij.; *Aquæ Destill.* q.s. Dissolve the gold in dilute nitro-hydrochloric acid; add more acid, evaporate at a heat not exceeding 212° F. (100° C.) until acid vapours cease to be given off, and dissolve the perchloride (AuCl_3) in fl.unc.v. of water.)

Use.—As a test for atropine, which forms with it a double salt, the chloride of gold and atropine.

SOLŪTIO BARĪI CHLORĪDI. Solution of Chloride of Barium. (*Barii Chloridi* unc.j.; *Aquæ Destill.* fl.unc.x.)

Use.—As a test for sulphuric acid and soluble sulphates.

SOLŪTIO BRŌMI. Solution of Bromine. (*Bromi* min.x.; *Aq. Destill.* fl.unc.v.)

Use.—As a test to detect the presence of iodine in the bromide of potassium.

SOLUTIO CALCĪI SULPHĀTIS. Solution of Sulphate of Calcium. (*Calcii Sulphatis* unc. $\frac{1}{4}$; *Aq. Destill.* Oj. Boil, shake well, allow the undissolved sulphate to subside, and then filter.)

Use.—As a test to detect oxalic acid.

SOLŪTIO CUPRI ACĒTĀTIS. Solution of Acetate of Copper. (*Cupri Subacetatis* unc.ss.; *Acidi Acetici* fl.unc.j.; *Aq. Destill.* q.s.)

Use.—For detecting the presence of butyric acid in valerianate of zinc; the suspected salt is first distilled with sulphuric acid; if butyric acid be present, the butyrate of copper, a bluish-white salt, is produced.

SOLŪTIO CUPRI AMMŌNĪO-SULPHĀTIS. Solution of Ammonio-Sulphate of Copper. (*Cupri Sulphatis* unc.ss.; *Liq. Ammon.* q.s.; *Aq. Destill.* q.s. Ammonia is added to solution of sulphate of copper in 8 fl.oz. of water, until the precipitate first formed is nearly dissolved. The solution is filtered and the bulk made up to 10 fl.oz. by addition of distilled water.)

Use.—As a test for arsenious acid, giving a green precipitate (Scheele's green), soluble in excess of ammonia.

SOLŪTIO FERRI SULPHĀTIS. Solution of Sulphate of Iron. (*Ferri Sulph. Gran.* gr.x.; *Aq. Dest. ferr.* fl.unc.j.)

Use.—As a test to detect the presence of nitric acid.

SOLŪTIO ICHTHYOCOLLI. Solution of Isinglass. (50 gr. of isinglass dissolved in fl.unc.v. of warm distilled water and filtered.)

Use.—As a test to distinguish tannic from gallic acid, with the latter giving no precipitate, but with the former a yellowish-white one.

SOLŮTIO INDĪGO SULPHĀTIS. Solution of Sulphate of Indigo. (*Indigo* gr.v.; *Acidi Sulphurici* fl.unc.x. Digest the indigo in a drachm of sulphuric acid in a water-bath, then pour the blue liquid into the remainder of the acid, shake the mixture, allow the sediment to settle, and decant the clear liquid.)

Use.—As a test to detect the presence of chlorine.

SOLŮTIO LACMI. Solution of Litmus. (*Lacmi cont.* unc.j.; *Spir. Rect.* fl.unc.x.; *Aq. Destill.* fl.unc.x.)

Use.—As a test for free alkali.

SOLŮTIO MAGNĚSĪI AMMŌNĪO-SULPHĀTIS. Solution of Ammonio-Sulphate of Magnesium. (*Magnesi Sulph.* unc.j.; *Ammonii Chlor.* unc.ss.; *Liq. Ammon.* fl.unc.ss.; *Aq. Destill.* q.s.)

Use.—As a tes for phosphate of ammonium, and also to determine the presence of phosphoric acid in phosphate of iron.

SOLŮTIO PLATĪNI PERCHLORĪDI. Solution of Perchloride of Platinum. (Prepared by adding water to a solution of platinum in nitro-hydrochloric acid.)

Use.—As a test to detect the presence of potassium and ammonium. Also as a test for nicotine, forming a double chloride of platinum and nicotine of a yellow colour.

SOLŮTĪO POTASSĪI ACĒTĀTIS. Solution of Acetate of Potassium. (*Potassii Acet.* unc.ss.; *Aq. Destill.* fl.unc.v.)

Use.—To distinguish tartaric from citric acid; forming, with the former, the bitartrate, but giving no precipitate with the latter.

SOLŮTIO POTASSĪI CHROMĀTIS. Solution of Yellow Chromate of Potassium. (*Potassii Bichromat.* gr.ccxv.; *Potassii Bicarb.* gr.cc.; *Aq. Destill.* fl.unc.x. Dissolve, boil, and filter.)

Use.—This solution only gives a red colour with nitrate of silver when any soluble bromide or iodide present is completely decomposed; hence it is used as an indicator of the termination of volumetric reactions.

SOLŮTIO POTASSĪI FERRICYANĪDI. Solution of Ferricyanide of Potassium. (*Potassii Ferricyanidi* unc.¼.; *Aq. Destill.* fl.unc.v.)

Use.—As a test for the protoxide of iron, and as a means of distinguishing ferrous from ferric salts.

SOLŮTIO POTASSĪI FERROCYANĪDI. Solution of Ferrocyanide of Potassium. (*Potassii Ferrocyanidi* unc.¼.; *Aq. Destill.* fl.unc.v.)

Use.—As a test to detect many metals in their salts, e.g.: iron, copper, manganese, tin, bismuth, antimony, mercury, &c.

SOLŮTIO POTASSĪI IODĪDI. Solution of Iodide of Potassium. (*Potassii Iodidi* unc.j.; *Aq. Destill.* fl.unc.x.)

Use.—As a test for the presence of lead in the oxide, acetate, and carbonate.

SOLUTIO POTASSIO-HYDRARGYRI IODIDI. Solution of Potassio-Mercuric Iodide. *Syn.* Nessler's Reagent (Appendix B.P.). (*Potassii Iodidi* gr. cxxxv.; *Hydrarg. Perchloridi* q.s.; *Liq. Sodæ* unc.ij.; *Aq. Destill.* Oj.)

Use.—As a test for free ammonia, with which it gives a brown coloration.

SOLUTIO SODII ACETATIS. Solution of Acetate of Sodium. (*Sodii Acetatis* unc.ss.; *Aq. Destill.* fl.unc.v.)

Use.—As a test for phosphate of calcium.

SOLUTIO SODII PHOSPHATIS. Solution of Phosphate of Sodium. (*Sodii Phosphatis* unc.j.; *Aq. Destill.* fl.unc.x.)

Use.—As a test for magnesium and lithium.

SOLUTIO STANNI CHLORIDI. Solution of Stannous Chloride. (*Stanni Granul.* unc.j.; *Acidi Hydrochl.* fl.unc.iiij.; *Aq. Destill.* q.s.)

Use.—To precipitate mercury from its combinations.

SOLUTIO VOLUMETRICA ACIDI OXALICI. Volumetric Solution of Crystallised Oxalic Acid. ($\text{H}_2\text{C}_2\text{O}_4 \cdot 2\text{H}_2\text{O} = 126$.) Dissolve 660 grs. of oxalic acid in a 10,000 grain flask, and increase the water until it has the exact volume of 10,000 grain-measures. 1000 grain-measures of this solution contain half a molecular weight in grains (63 grains) of the acid, and are therefore capable of neutralising a molecular weight in grains of any alkali, or half a molecular weight of an alkaline carbonate. 100 cubic centimetres contain 1-20th of a molecular weight in grammes (6·3) of the acid, and will neutralise 1-10th of a molecular weight in grammes of an alkali.

Use.—To determine the amount of an alkali in alkaline carbonates.

The following substances are tested with this solution :—

	British system		Metric system	
	Grains weight of substance	Grain-measures of vol. sol.	Grammes weight of substance	c.c. of vol. sol.
Ammonii Carbonas.	52·3	= 1000 or	5·23	= 100·0
Borax	191·0	= 1000 or	19·10	= 100·0
Liq. Ammonia	85·0	= 500 or	8·50	= 50·0
„ „ Fort.	52·3	= 1000 or	5·23	= 100·0
„ Calcis	4375·0	= 180 or	437·50	= 18·0
„ „ Sacchar.	460·2	= 254 or	46·02	= 25·4
„ Plumbi Subacet.	284·5	= 500 or	28·45	= 50·0
„ Potassae	462·9	= 482 or	46·29	= 48·2
„ „ Efferv.	4375·0	= 150 or	437·50	= 15·0
„ Sodae	458·0	= 470 or	45·80	= 47·0
„ „ Efferv.	4375·0	= 178 or	437·50	= 17·8
Plumbi Acetas	38·0	= 200 or	3·80	= 20·0
Potassa Caustica	56·0	= 900 or	5·60	= 90·0
Potassii Bicarbonas	50·0	= 500 or	5·00	= 50·0
„ Carbonas	83·0	= 980 or	8·30	= 98·0
„ Citras	102·0	= 1000 or	10·20	= 100·0
„ Tartras	122·0	= 990 or	12·20	= 99·0
„ „ Acida	204·0	= 1000 or	20·40	= 100·0
Soda Caustica	40·0	= 900 or	4·00	= 90·0
„ Tartarata	141·0	= 990 or	14·10	= 99·0
Sodii Bicarbonas	84·0	= 1000 or	8·40	= 100·0
„ Carbonas	143·0	= 960 or	14·30	= 96·0
Sodium	23·0	= 975 or	2·30	= 97·5

* * * In the Pharmacopœia the processes for volumetric estimations

have been altered, so as to meet the requirements both of the British and metric systems. 'According to the British system, the quantities of substances to be tested are expressed in grains by weight, whilst the quantities of the test solutions are expressed in grain-measures, the grain-measure being the volume of a grain of distilled water. According to the metric system, the quantities of the substances to be tested are expressed in grammes by weight, and the quantities of the test solutions are expressed in cubic centimetres, the cubic centimetre being the volume of a gramme of distilled water.' The gramme is more than 15 times as great as the British grain, and in practice it will be found convenient in substituting the metric for the British system to reduce the values of the number to 1-10th.

For the British system will be required—

1. A flask which, when filled to a certain mark, will contain 10,000 grain-measures of distilled water at 60° F. (15°·5 C.)
2. A graduated cylindrical jar which, when filled to 0, holds 10,000 grains of distilled water, and is divided into 100 equal parts.
3. A burette,—a graduated glass tube, which, when filled to 0, holds 1000 grains of distilled water, and is divided into 100 equal parts.

Each part therefore corresponds to 10 grain-measures.

For the metric system are required—

1. A glass flask which, when filled up to a certain mark, contains one litre, or 1000 cubic centimetres.
2. A graduated cylindrical jar, which, filled to 0, contains one litre (1000 cubic centimetres), and is divided into 100 equal parts.
3. A burette,—a graduated tube, which, filled to 0, holds 100 cubic centimetres, and is divided into 100 equal parts.

One cubic centimetre is the volume of one gramme of distilled water at 4° C. 1000 cubic centimetres=one litre.

The Pharmacopœia orders that the volumetric solutions should be shaken, in order to secure uniform strength, that they should be kept in stoppered bottles, and that all measurements should be made at 60° F. (15°·5 C.)

SOLÛTIO VOLUMETRICA ARGENTI NITRATIS. Volumetric Solution of Nitrate of Silver. ($\text{AgNO}_3=170$.) (Put 170 gr. of nitrate of silver in the 10,000 grain flask, and dissolve in sufficient distilled water to make the exact bulk of 10,000 grain-measures. 1000 grains contain 17 gr. of the nitrate, or 1-10th of its molecular weight in grains. 100 cubic centimetres contain 1-100th of a molecular weight in grammes of the nitrate, or 1·7 grammes.)

Use.—As a test for the strength of the following:—

	British system		Metric system	
	Grains weight of substance	Grain-measures of vol. sol.	Grammes weight of substance	c.c. of vol. sol.
Acidum Hydrocyan. Dil.	270=	1000	or 27·0=	100·0
Ammonii Bromidum .	5=	{ 508·5 to 514·5 }	or 0·5=	{ 50·85 to 51·45 }
Potassii Bromidum .	10=	{ 838 to 850 }	or 1·0=	{ 83·8 to 85·0 }
Potassii Cyanidum .	10=	730	or 1·0=	73·0
Potassii Iodidum .	10=	602	or 1·0=	60·2
Sodii Bromidum .	10=	960	or 1·0=	96·0
Sodii Iodidum .	10=	660	or 1·0=	66·0

SOLÛTIO VOLUMETRICA IODI. Volumetric Solution of Iodine. (Pure iodine 127 gr.; iodide of potassium 180 gr.; distilled water a sufficiency.) Dissolve the iodine and iodide with water, and when the solution is complete add distilled water until it has the exact volume of 10,000 grain-measures. 1000 measures contain 12·7, or 1-10th of molecular weight of iodine, and therefore correspond to 1·7 gr. of sulphuretted hydrogen, 3·2 gr. of sulphurous, and 4·95 gr. of arsenious anhydride.

Use.—For determining the amount of sulphuretted hydrogen or of a metallic sulphide in a fluid, but chiefly for the estimation of sulphurous and arsenious acids.

	British system			Metric system	
	Grains weight of substance	Grain-measures of vol. sol.		Grammes weight of substance	c.c. of vol. sol.
Acidum Arseniosum .	4·0	= 808	or	·4	= 80·3
„ Sulphureosum .	64·0	= 1000	or	6·40	= 100·0
Liq. Arsenicalis .	442·0	= 875	or	44·20	= 87·50
„ Arsen. Hydrochl. .	442·0	= 875	or	44·20	= 87·50
Sodii Hyposulphis .	24·8	= 1000	or	2·48	= 100·0

SOLÛTIO VOLUMETRICA POTASSII BICHROMATIS. Volumetric Solution of Bichromate of Potassium. ($K_2Cr_2O_7=295$.) (Dissolve 147·5 grains of the bichromate in distilled water, and increase the dilution until it has the exact bulk of 10,000 grain-measures.) 1000 grain-measures of this solution contain 14·75 grains of the bichromate; and this, when added to a solution of a ferrous salt, acidulated with hydrochloric acid, is capable of converting 16·8 grains of iron from the ferrous to the ferric state. This solution is used for determining the proportions of the ferrous salt in the following preparations:—

	British system			Metric system	
	Grains weight of substance	Grain-measures of vol. sol.		Grammes weight of substance	c.c. of vol. sol.
Ferri Arsenias	100·0	= 225	or	10·0	= 22·5
„ Carb. Sacch.	30·0	= 287·5	or	3·0	= 28·75
„ Phosphas	30·0	= 279	or	3·0	= 27·9
„ Sulphas	42·1	= 500	or	4·21	= 50·0
„ „ Exsiccata	10·0	= 191	or	1·0	= 19·1
„ „ Granulata	41·7	= 500	or	4·17	= 50·0

When the whole of the ferrous salt is converted into the ferric, a drop of the solution will give no reaction with the solution of the ferricyanide of potassium.

SOLÛTIO VOLUMETRICA SODÆ. Volumetric Solution of Soda. (Hydrate of Sodium. $NaHO=40$.) (Fill a burette with the solution of soda, and drop this into 1000 grain-measures of the volumetric solution of oxalic acid until litmus gives no reaction. Note the number of measures (n) of the solution used, and having then taken 9000 grain-measures of the solution of soda, add distilled water till

it becomes $\frac{9000 \times 1000}{n}$ grain-measures. If, for example, $n=930$, the 9000 grain-measures shall be increased to $\frac{9000 \times 1000}{930} = 9677$ grain-

measures. 1000 grain-measures of this solution contain one molecular weight in grains (40 grains) of hydrate of sodium, and will neutralise one molecular weight in grains of any monobasic acid. 100 cubic centimetres contain 1-10th of a molecular weight in grammes (4 grammes) of hydrate of sodium, and will neutralise 1-10th of a molecular weight in grammes of a monobasic acid.)

This solution is used for testing the following substances:—

	British system			Metric system	
	Grains weight of substance	Grain-measures of vol. sol.		Grammes weight of substance	c.c. of vol. sol.
Acetum	445·4	= 402	or	44·54	= 40·2
Acid. Acet.	182·0	= 1000	or	18·20	= 100·0
" Dil.	440·0	= 313	or	44·00	= 31·3
" Glac.	60·0	= 990	or	6·00	= 99·0
Citricum	70·0	= 1000	or	7·00	= 100·0
Hydrobrom. Dil.	810·0	= 1000	or	81·00	= 100·0
Hydrochlor.	114·8	= 1000	or	11·48	= 100·0
" Dil.	345·0	= 1000	or	34·50	= 100·0
Lacticum	120·0	= 1000	or	12·00	= 100·0
" Dil.	800·0	= 1000	or	80·00	= 100·0
Nitric.	90·0	= 1000	or	9·00	= 100·0
" Dil.	361·3	= 1000	or	36·13	= 100·0
Nitro-hydrochl. Dil.	352·0	= 883	or	35·20	= 88·3
Sulphuricum	50·0	= 1000	or	5·00	= 100·0
" Arom.	195·0	= 500	or	19·50	= 50·0
" Dil.	359·0	= 1000	or	35·90	= 100·0
Tartaricum	25·0	= 330	or	2·50	= 33·0

SOLUTIO VOLUMETRICA SODII HYPOSULPHITIS. Volumetric

Solution of Hyposulphite of Sodium. Dissolve 280 grs. of hyposulphite of sodium ($\text{Na}_2\text{S}_2\text{O}_3 \cdot 5\text{H}_2\text{O} = 248$) in 10,000 grain-measures of distilled water. Fill the burette with this solution, and drop it cautiously into 1000 grain-measures of the volumetric solution of iodine until the brown colour be just discharged. Note the number of measures (n) which have been used to produce this effect, and then put 8000 grain-measures of the same solution into a graduated jar, and augment this quantity by the addition of distilled water until it amounts to $\frac{8000 \times 1000}{n}$ grain-measures. If, for example,

$n=950$, the 8000 grains of the solution of the hyposulphite should be diluted with distilled water so as to become $\frac{8000 \times 1000}{950} = 8421$ grain-

measures. 1000 grain-measures of this solution contain 24·8 grs. of the hyposulphite, and therefore correspond to 12·7 grs. of iodine.

Use.—This solution is used for testing the following substances. In each case, except in that of iodum, a solution of iodide of potassium and hydrochloric acid are added to the substance, and the amount of iodine so liberated is indicated by this solution:—

	British system			Metric system	
	Grains weight of substance	Grain-measures of vol. sol.		Grammes weight of substance	c.c. of vol. sol.
Calx Chlorinata	5·0	=	467	or 0·50	= 46·7
Iodum	12·7	=	1000	or 1·27	= 100·0
Liq. Calcis Chlorinatæ	80·0	=	450	or 8·00	= 45·0
„ Chlori	339·0	=	750	or 43·9	= 75·0
„ Sodæ Chlorinatæ	70·0	=	500	or 7·0	= 50·0

SPIRĪTUS ÆTHĒRIS. Spirit of Ether. (*Ætheris fl.unc.x.*; *Spiritus Rectificati* Oj.) Sp. gr. 0·809.

Oper.—Stimulant, carminative, antispasmodic.

Use.—In hysteria, and in spasmodic asthma, angina pectoris, cases of nervous depression, and to allay irritation in painful diseases. In headache externally when the part to which it is applied is kept covered by the hand, in which case it acts as a rubefacient.

Dose.—Min.xxx. to min.xc. in any convenient vehicle.

Off. Prep.—*Tinctura Lobeliae Ætherea.*

SPIRĪTUS ÆTHĒRIS COMPOSITUS. Compound Spirit of Ether. *Syn.* Hoffmann's Anodyne. (Mix 36 fluid ounces of sulphuric acid with 40 fluid ounces of rectified spirit, and let the mixture stand for 24 hours. Distil until the fluid in the retort begins to blacken. Shake the distillate with solution of lime, remove the supernatant liquor and expose it to the air for 12 hours. Mix 3 fluid drachms of the resulting liquid with ether fl.unc.viij., and rectified spirit fl.unc.xvj.)

Oper. & Use.—Stimulant, anodyne.

Dose.—Min.xxx. to fl.dr.ij.

SPIRĪTUS ÆTHĒRIS NITRŌSI. Spirit of Nitrous Ether. *Syn.* Spiritus Ætheris Nitrici. (*Acidi Nitrici fl.unc.iiij.*; *Acidi Sulphurici fl.unc.ij.*; *Cupri in fila tenuia tracti* (No. 25) unc.ij.; *Spiritus Rectificati* q.s. Having mixed the acids separately with spirit, put them into a retort with the copper wire, and distil at a temperature commencing at 170° F. (76°·7 C.), but not exceeding 180° F. (79°·4 C.). Preserve in well-closed vessels.)

Comp.—A spirituous solution containing nitrous ether (C₂H₅NO₂), aldehyd, and other substances.

Prop.—Odour fragrant; taste pungent; acidulous, reddening litmus; colourless; volatile, inflammable; soluble in alcohol and water; sp. gr. ·840 to ·845. It effervesces feebly or not at all with bicarbonate of potassium. Becomes deep olive-brown or black on being shaken with the solution of sulphate of iron, and subsequently adding a few drops of sulphuric acid.

Oper.—Stimulant, refrigerant, diuretic, antispasmodic, diaphoretic.

Use.—In febrile diseases; spasmodic asthma; and dropsies, to aid more active remedies.

Dose.—Fl.dr.ss. to fl.dr.ij. in any convenient vehicle.

SPIRĪTUS AMMŌNIÆ AROMATICUS. Aromatic Spirit of Ammonia. *Syn.* Sal Volatile. (*Ammonii Carbonatis* unc.iv.; *Liq. Ammoniae Fort.* fl.unc. viij.; *Olei Myristicæ* fl.dr.ivss.; *Olei Limonis* fl.dr.vjss.; *Spiritu Rectific.* Ovj.; *Aquæ Oliij.*) Sp. gr. 0·886.

Oper.—Stimulant, antispasmodic, diaphoretic.

Use.—In the same cases as ammonia; it is more grateful, and less acrimonious.

Dose.—Fl. dr.ss. to fl.dr.j. in any convenient vehicle.

Off. Prep.—*Tinct. Guaiaci Ammoniata. Tinct. Valerianæ Ammoniata.*

Incomp.—Acids, acidulous salts, metallic salts, solution of lime.

SPIRĪTUS AMMŌNIÆ FŒTĪDUS. Fœtid Spirit of Ammonia. (*Asafœtidæ* unc.jss.; *Liq. Ammonice Fort.* fl.unc.ij.; *Spir. Rectificati* q.s. Break the asafœtida into small pieces, and macerate it in 15 ounces of spirit for twenty-four hours; then distil off the spirit, and mix the product with the solution of ammonia and sufficient rectified spirit to make a pint.)

Prop.—Odour fœtid and ammoniacal. Sp. gr. .847; taste alkaline, acrid, and slightly alliaceous; pale when recent; coloured brown by age.

Oper.—Stimulant, antispasmodic.

Use.—In hysteria, atonic gout, and spasmodic asthma.

Dose.—Fl.dr.ss. to fl.dr.j. in water.

SPIRĪTUS ARMORĀCIÆ COMPŌSĪTUS. Compound Spirit of Horseradish. (*Armoraciæ Rad. concisæ, Aurant. Cort., āā* unc.xx.; *Myristicæ contus.* unc.ss.; *Spirit. ten.* cong.j.; *Aquæ Oiiij.* Mix, and distil a gallon.) Sp. gr. 0.920.

Oper.—Stimulant, antispasmodic, diuretic.

Use.—In dropsy as a diuretic, also in atonic dyspepsia, and flatulence. Not much used.

Dose.—Fl.dr.j. to fl.dr.ij.

SPIRĪTUS CAJUPŪTI. Spirit of Cajuput. (*Olei Cajuputi* fl.unc.j.; *Spiritus Rectificati* fl.unc.xlix.)

Oper.—Stimulant, antispasmodic, diaphoretic, and rubefacient.

Use.—In hysteria, flatulent colic, and cholera; externally in rheumatism, gout, sprains, &c.

Dose.—Min.xxx. to fl.dr.j.

SPIRĪTUS CAMPHŌRÆ. Spirit of Camphor. (*Camphoræ* unc.j.; *Spirit. Rect.* unc.ix. Dissolve.)

Oper.—Stimulant, anodyne.

Use.—External, against rheumatic pains, paralytic numbness, chilblains, gangrene; also, internally, as a sedative in mania and melancholia, hysteria, and spasmodic diseases.

Dose.—Min.x. to min.xxx.

Incomp.—Water, which precipitates the camphor.

SPIRĪTUS CHLORŌFORMI. Spirit of Chloroform. *Syn.* Chloric Ether; Spirit of Chloric Ether. (*Chloroformi* fl.unc.j.; *Spir. Rectificati* fl.unc.xix.) Sp. gr. .871.

Oper.—Narcotic, sedative, antispasmodic.

Use.—In hysteria, depressed conditions of the nervous, circulatory, and respiratory systems, neuralgia, colic, &c.

Dose.—Min.xx. to min.lx.

SPIRĪTUS CINNAMŌMI. Spirit of Cinnamon. (*Olei Cinnamomi* fl.unc.j.; *Spirit. Rect.* fl.unc.xlix.)

Oper.—Stimulant, carminative.

Use.—In atonic dyspepsia and flatulence.

Dose.—Fl.dr.ss. to fl.dr.j.

Off. Prep.—*Acid. Sulphuric. Aromat.*

SPIRĪTUS JUNIPĒRI. Spirit of Juniper. (*Olei Juniperi* fl.unc.j.; *Spiritus Rectificati* fl.unc.xlix.)

Oper.—Stimulant, diuretic.

Use.—In dropsy, dysmenorrhœa, in which it seems to have a sedative action.

Dose.—Fl.dr.ss. to fl.dr.j.

Off. Prep.—*Mistura Creasoti.*

SPIRĪTUS LAVANDŪLÆ. Spirit of Lavender. (*Olei Lavandulæ* fl.unc.j.; *Spir. Rect.* fl.unc.xlix.) A spirituous solution of the oil.

Oper.—Carminative, stimulant.

Use.—In flatulence, hysteria, hypochondriasis, and nervous affections.

Dose.—Fl.dr.ss. to fl.dr.j.

SPIRĪTUS MENTHÆ PIPERĪTÆ. Spirit of Peppermint. (*Olei Menthæ Pip.* fl.unc.j.; *Spiritus Rectific.* fl.unc.xlix.)

Oper.—Carminative, stimulant.

Use.—In nausea, flatulence, and faintings, and as an addition to stimulant, narcotic, and purgative draughts.

Dose.—Fl.dr.ss. to fl.dr.j.

SPIRĪTUS MYRISTICÆ. Spirit of Nutmeg. (*Olei Myristicæ* fl.unc.j.; *Spir. Rectificati* fl.unc.xlix.)

Oper.—Cordial, carminative.

Use.—In faintings; and as an adjunct to griping purgatives.

Dose.—Fl.dr.ss. to fl.dr.j.

Off. Prep.—*Mist. Ferri Comp.*

SPIRĪTUS RECTIFICĀTUS. Rectified Spirit. (Obtained by the distillation of fermented saccharine fluids.)

Prop.—Colourless; is not rendered opaque by the addition of water.

Sp. gr. 0.838. Burns with a blue flame without smoke. Four ounces with 30 grain-measures of the volumetric solution of nitrate of silver exposed for 24 hours to bright light, and then decanted from the black powder which has formed, undergoes no further change from continued use of the test.

Comp.—Alcohol (C_2H_5HO) with 16 per cent. of water.

Oper. & Use.—The same as of absolute alcohol, and in the preparation of several tinctures.

Off. Prep.—*Tincturæ varicæ.*

SPIRĪTUS RŌSMARĪNI. Spirit of Rosemary. (*Olei Rosmarini* fl.unc.j.; *Spir. Rectif.* fl.unc.xlix.)

Comp.—Stimulant.

Use.—Externally to pains and bruises; a fragrant perfume; and as a lotion to strengthen the hair.

Dose.—Fl.dr.ss. to fl.dr.j.

SPIRĪTUS TENUIOR. Proof Spirit. Sp. gr. .920. (*Spiritus Rectificati* Ov.; *Aquæ Destillatæ* Oii.j.)

Comp.—Absolute alcohol 49 per cent. by weight.

Oper.—Stimulant.

Use.—In the same cases internally as those in which alcohol is used; externally, much diluted, in ophthalmia, superficial inflammation, and burns; chiefly employed as a solvent of vegetable matters in the formation of tinctures, &c.

Off. Prep.—*Tincturæ varicæ.*

SPIRĪTUS VĪNI GALLĪCI. French Brandy. Spirit distilled from French wine.

Prop.—Peculiar flavour; a light sherry colour, derived from the cask.

Use.—In typhoid conditions; in atonic vomiting, combined with soda-water.

Off. Prep.—*Mist. Spir. Vini Gallici.*

STANNUM GRANULATUM. (Appendix I. B.P.) Tin, granulated. (Grain tin, reduced to small fragments by fusing, and, immediately the tin is melted, pouring it in a thin stream into cold water.)

Use.—For preparation of test solution of stannous chloride.

STAPHISAGRIÆ SEMINA. Stavesacre Seeds. (*Delphinium Staphisagrie*, N.O. *Ranunculaceæ*.)

Comp.—Staphisagrine, delphinine, resin, &c.

Prop.—Taste acrid, bitter, nauseous; blackish-brown; triangular or quadrangular; pitted.

Oper.—Depressant; parasiticide.

Use.—Only externally as ointment.

Off. Prep.—*Unguentum Staphisagrie.*

STRAMŌNII SEMĪNA. Stramonium. (*Datura Stramonium*, N.O. *Solanaceæ*. Indigenous. ☉) Active principle, Daturine.

Prop.—The seeds are brownish-black, reniform, flat; odour disagreeable when bruised; taste bitterish.

Oper.—Narcotic, antispasmodic, acting on the respiratory organs, especially when the smoke of the burning leaf is inhaled.

Use.—In asthma, convulsive coughs, gastrodynia.

Off. Prep.—*Extractum Stramonii*, *Tinctura Stramonii*.

Incomp.—Caustic fixed alkalis, as soda and potash.

STRYCHNĪNA. Strychnine. (An alkali prepared from *nux vomica*.)

Comp.— $C_{21}H_{22}N_2O_2$.

Prop.—In right square octahedrons or prisms. Soluble in fixed and volatile oils, boiling rectified spirit, and chloroform; sparingly soluble in water; insoluble in ether. Its flavour is intensely bitter. Pure sulphuric acid forms with it a colourless solution, which, on the addition of bichromate of potassium, acquires an intensely violet hue, speedily passing through red to yellow. Not coloured by nitric acid. As it is possessed of violent properties, it must be used with the greatest caution.

Oper.—Stimulant of the anterior columns of the spinal cord. Tonic and antispasmodic.

Use.—As a tonic in pyrosis, passive diarrhoea, and leucorrhœa, chorea, neuralgia, incontinence of urine, in habitual constipation. In cases of partial paralysis not depending on organic disease, especially when caused by lead-poisoning.

Dose.—From gr. $\frac{1}{30}$ to gr. $\frac{1}{12}$.

Off. Prep.—*Liquor Strychninæ Hydrochloratis*.

STYRAX PRÆPARĀTUS. Prepared Storax. (A balsam from the inner bark of *Liquidambar orientalis*, N.O. *Liquidambaraceæ*, Syria. ♀)

Comp.—Styracin, cinnamic acid, and styrol, which is readily converted into benzoic acid.

Prop.—Semi-transparent brownish-yellow semifluid; odour fragrant, agreeable; taste aromatic. Heated in a test-tube on the vapour-bath it becomes more liquid, but gives off no moisture; boiled with

solution of bichromate of potassium and sulphuric acid, it evolves an odour resembling that of essential oil of bitter almonds.

Oper.—Stimulant, expectorant.

Use.—Seldom used alone, but as an adjunct, chiefly on account of its fragrance and aromatic properties.

Dose.—Gr.v. to gr.xx.

Off. Prep.—*Tinct. Benzoini Comp.*

SUBACETATE OF COPPER OF COMMERCE. *Syn.* Verdigris. (Appendix, B.P.)

Use.—In preparing the test solution of acetate of copper.

SUCCUS BELLADONNÆ. Juice of Belladonna. (The expressed juice of the fresh leaves and the young branches of belladonna, mixed with rectified spirit in the proportion of three measures of juice to one of spirit. To be kept in a cool place.)

Oper.—Direct sedative on the spinal cord.

Use.—To relieve cough, to allay pain, and in constipation to stimulate the longitudinal fibres of the muscles of the intestines.

Dose.—Min.v. to min.xv.

SUCCUS CONİL. Juice of Hemlock. (The expressed juice of fresh leaves mixed with rectified spirit in the proportion of one measure of spirit to three of juice.)

Oper.—Direct sedative on the spinal cord.

Use.—To relieve cough and to allay pain.

Dose.—Fl.dr.ss. to fl.dr.j.

Off. Prep.—*Cataplasma Conii.* *Vapor Coninæ.*

SUCCUS HYOSCYĂMI. Juice of Henbane. (The expressed juice of the fresh leaves, flowering tops, and young branches of hyoscyamus, mixed with rectified spirit in the proportion of three measures of juice to one of spirit. To be kept in a cool place.)

Oper.—Narcotic, anodyne.

Use.—To relieve pain, to ease cough, and to induce rest and sleep for those cases in which opium cannot be used. It neither affects the head as opium nor occasions constipation.

Dose.—Fl.dr.ss. to dr.j.

SUCCUS SCOPĂRII. Juice of Broom. (Expressed juice of fresh broom tops, mixed with rectified spirit in the proportion of one measure of spirit to three of juice.)

Oper.—Diuretic.

Use.—In dropsies and cardiac diseases.

Dose.—Fl.dr.j. to fl.dr.ij.

SUCCUS TARAXĂCI. Juice of Dandelion. (Expressed juice of the fresh dandelion root mixed with spirit in the proportion of one measure of rectified spirit to three of the juice.)

Oper.—Tonic, aperient, diuretic.

Use.—In chronic inflammation and functional and organic disease of the liver; chronic derangements of the stomach; jaundice, dropsy.

Dose.—Fl.dr.j. to fl.dr.ij.

SULPHATE OF COPPER, ANHYDROUS. (Appendix, B.P.) CuSO_4 . (Sulphate of copper heated to 400°F. (204°C.), to drive off water of crystallisation.)

Prop.—Yellowish-white powder, becoming blue in presence of water.

Use.—As a test to prove the absence of water in ethylic alcohol.

SULPHIDE OF IRON. FeS . (Appendix, B.P.) (By combining proper proportions of the elements by the aid of heat.)

Use.—In the preparation of sulphuretted hydrogen.

SULPHUR PRÆCIPITĀTUM. Precipitated Sulphur. (*Sulphur Sublim.* unc.v.; *Calci Hydratis* unc.iiij.; *Acidi Hydrochlor.* fl.unc.viiij. vel q.s.; *Aq. Dest.* q.s.)

Prop.—A greyish-yellow soft powder, free from grittiness and the smell of sulphuretted hydrogen, burns with a blue flame and the evolution of sulphurous acid; volatilised by heat. The water in which it has been boiled does not affect litmus paper. Under the microscope seen to consist of opaque globules. In other respects like sublimed sulphur.

Use.—Same as sublimed sulphur.

Dose.—Gr.xx. to gr.lx.

SULPHUR SUBLĪMĀTUM. Sublimed Sulphur. (The sulphur of commerce, which is obtained from pyrites, sublimed in close vessels.)

Prop.—Slightly gritty, fine greenish-yellow colour; inodorous, unless rubbed between the fingers or heated; tasteless; very inflammable; volatilised by heat, does not redden moistened litmus paper. Solution of ammonia, agitated with it and filtered, does not, on evaporation, leave any residue.

Oper.—Stimulant, laxative, diaphoretic.

Use.—As a laxative in chronic rheumatism, atonic gout, rachitis, asthma, and some pulmonary affections; in hæmorrhoidal affections it is the only laxative that should be employed, united with magnesia or acid tartrate of potassium. A specific in itch, and several cutaneous diseases, when either internally or externally exhibited.

Off. Prep.—*Confectio Sulphuris*. *Emplastrum Ammoniaci cum Hydrargyro*. *Emplastrum Hydrargyri*. *Pulvis Glycyrrhizæ Comp.* *Unguentum Sulphuris*. Also employed in preparation of *Antimonium Sulphuratum*. *Potassa Sulphurata*. *Sulphuris Iodidum*. *Sulphur Sublimatum*.

SULPHURETTED HYDROGEN. H_2S . (Appendix, B.P.) (By the action of dilute sulphuric acid on sulphide of iron.)

Use.—In the preparation of dilute hydrobromic acid, and as a test for arsenic, antimony, lead, copper, mercury, &c.

SULPHŪRIS IODĪDUM. Iodide of Sulphur. (Heat iodine 4 parts and sublimed sulphur 1 part, previously thoroughly mixed, and gradually increase the heat so as to produce liquefaction; when cool, remove by breaking the glass. Preserve in a well-stoppered bottle.)

Prop.—A greyish-black solid substance, with a radiated crystalline appearance; smells and stains like iodine; soluble in about 60 parts of glycerine, insoluble in water, but decomposed when boiled with it. If 100 grains be thoroughly boiled with water, the iodine will pass off in vapour, and about 20 grains of sulphur will remain.

Oper.—Alterative and resolvent; only used externally.

Use.—In cutaneous diseases.

Off. Prep.—*Unguentum Sulphuris Iodidi*.

SUMBUL RADIX. Sumbul Root. (Dried transverse sections of the root of *Ferula Sumbul* (*Euryangium Sumbul*). N.O. *Umbelliferae*. Imported from Russia and India.)

Prop.—Pieces nearly round, from 1 to 3 inches in diameter, and from

$\frac{3}{4}$ to 1 inch in thickness; dusky brown rough bark, with short bristly fibres. Interior porous, consisting of irregular, easily separated fibres; odour strong, like musk; taste at first sweetish, but afterwards bitterish and aromatic.

Oper.—Antispasmodic, stimulant.

Use.—In diseases of the nervous system.

Off. Prep.—*Tinctura Sumbul.*

SUPPÖSĪTÖRĪA ACĪDI CARBÖLĪCI CUM SAPÖNE. Carbolie Acid Suppositories. (*Acidi Carbolici* gr.xij.; *Saponis Animalis* gr.clxxx.; *Glycerini Amyli* gr.xl. vel q.s.) Divide into twelve. Each contains one grain of carbolie acid.

Oper.—Antiseptic.

Use.—In ulcers and fissures of the rectum.

SUPPÖSĪTÖRĪA ACĪDI TANNĪCI. Tannic Acid Suppositories. (*Acidi Tannici* gr.xxxvj.; *Olei Theobromatis* gr.cxliv. Mix gradually, with gentle heat. Pour the mixture into suitable moulds of the capacity of 15 grains, or the fluid mixture may be allowed to cool, and then be divided into 12 parts in a convenient shape.) Each suppository contains 3 grains of tannic acid.

Oper.—Astringent.

Use.—In fulness of the hæmorrhoidal vessels and relaxation of the mucous membrane.

SUPPÖSĪTÖRĪA ACĪDI TANNĪCI CUM SAPÖNE. Tannic Acid Suppositories with Soap. (*Acidi Tannici* gr.xxxvj.; *Glycerini Amyli* gr.xxx.; *Saponis Animalis* gr.c.; *Amyli* q.s.) Divide into twelve. Each contains 3 grains of tannic acid.

Oper.—Astringent.

Use.—In fulness of the hæmorrhoidal vessels and relaxation of the mucous membrane.

SUPPÖSĪTÖRĪA HYDRARGŸRI. Mercurial Suppositories. (Prepared much as the Suppositoria Acidi Tannici, with Unguentum Hydrargyri instead of the tannic acid.) Each suppository contains 5 grains of the unguentum hydrargyri.

Oper.—Alterative, resolvent.

Use.—In chronic ulceration of rectum, and in cases when it is necessary to produce mercurial action, and the stomach is too irritable to bear the medicine.

SUPPÖSĪTÖRĪA IODOFORMI. Iodoform Suppositories. (*Iodoformi* gr.xxxvj.; *Olei Theobromatis* gr.cxliv.) Divide into twelve. Each contains 3 grains of iodoform.

Oper.—Local anæsthetic and antiseptic.

Use.—In operations on the bladder or rectum; to relieve the pain of cancer.

SUPPÖSĪTÖRĪA MORPHĪNÆ. Morphine Suppositories. (*Morphinæ Hydrochloratis* gr.vj.; *Olei Theobromatis* gr.clxxiv. Prepared as above.) Each suppository contains $\frac{1}{2}$ grain of the hydrochlorate of morphine.

Oper.—Sedative, narcotic.

Use.—In irritable conditions of the rectum, in painful affections of the urinary organs, in diarrhœa, and generally to obtain the action of morphine, when the stomach will not bear the medicine.

SUPPÖSĪTÖRĪA MORPHĪNÆ CUM SAPÖNE. Morphine Suppositories with Soap. (*Morph. Hydrochlor. gr.vj.*; *Glycerini Amyli gr.xxx.*; *Sapon. Animal. gr.c.*; *Amyli q.s.*) Divide into twelve. Each contains $\frac{1}{2}$ grain of hydrochlorate of morphine.

Oper.—Sedative and narcotic.

Use.—In irritable conditions of the rectum, in painful affections of the urinary organs, in diarrhœa, and in cases in which morphine is indicated but cannot be taken into the stomach.

SUPPÖSĪTÖRĪA PLUMBI COMPÖSĪTA. Compound Lead Suppositories. (*Plumbi Acet. gr.xxxvj.*; *Opīi gr.xij.*; *Olei Theobromatis gr.cxxxij.*) Divide into twelve. Each suppository will contain 3 grains of lead and 1 grain of opium.

Oper.—Astringent, sedative.

Use.—In diarrhœa, hæmorrhage from the rectum, uterus, or prostate, or when there is painful relaxation of mucous membrane of the rectum.

* * * *Note.*—Many medicines may be administered in the form of suppository by the means of cacao butter (*Oleum Theobromatis*).

SYRŪPUS. Syrup. (*Sacchari lb.v.*; *Aquæ Destill. Oij.*) Dissolve the sugar in the water with a gentle heat, and add, after cooling, sufficient distilled water to raise the weight to seven and a half pounds. Sp. gr. 1.330.

Prop.—Inodorous, sweet, thickish, transparent.

Use.—To cover nauseous tastes; but it seldom renders medicine more pleasant, and might well be altogether dispensed with. It is the base of most of the other syrups.

Off. Prep.—*Confectio Opīi. Conf. Scammonii. Mistura Cretæ. Mistura Creasoti. Pilula Cambogiæ Comp. Syrupus Aurantīi. Syrup. Chloral. Syrupus Zingiberis. Tinct. Chloroformi et Morph.*

SYRŪPUS AURANTĪI. Syrup of Orange Peel. (*Tincturæ Aurantīi fl.unc.j.*; *Syrupi fl.unc.vij.*)

Oper.—Slightly tonic; stomachic.

Use.—An elegant adjunct to stomachic draughts and mixtures.

Dose.—Fl.dr.j.

Off. Prep.—*Conf. Sulphuris.*

SYRŪPUS AURANTĪI FLORIS. Syrup of Orange Flower. (*Aquæ Aurantīi Floris fl.unc.viiij.*; *Sacchari Albi lb.iiij.*; *Aquæ Destillatæ fl.unc.xvj. vel q.s.*) The product must be lb.ivss., and the sp. gr. 1.330.

Use.—To flavour medicines. It covers the taste of chalybeate medicines.

Dose.—Fl.dr.j.

SYRŪPUS CHLORAL. Syrup of Chloral. (*Chloral Hydrat. gr.lxxx.*; *Aquæ Destill. fl.dr.jss.*; *Syrupi q.s.* Add sufficient simple syrup to complete the ounce, so that one drachm shall contain ten grains.)

Oper.—Sedative, narcotic, anodyne.

Use.—To procure sleep, to allay pain in gout, nephritic calculus, dental caries, to ease cough and asthmatic paroxysms, and to subdue choreic movements and maniacal excitement.

Dose.—Fl.dr.ss. to fl.dr.ij.

SYRŪPUS FERRI IODĪDI. Syrup of Iodide of Iron. (*Iodī unc.ij.*; *Ferri unc.j.*; *Aquæ Destill. fl.unc.xiiij.*; *Sacchari unc.xxviij.*) Digest the iodine and iron in 3 ounces of water in a flask at a gentle heat

till the froth becomes white; then filter the liquid while still hot into the syrup, previously prepared. The product should weigh about two pounds eleven ounces, and its sp. gr. should be 1.385. It contains 4.3 grains of iodide of iron in 1 fl.dr.

Oper.—Tonic and alterative.

Use.—In scrofulous affections, anæmia, chlorosis, rheumatoid arthritis, and certain forms of secondary syphilis.

Dose.—Min.x. to fl.dr.j.

SYRŪPUS FERRI PHOSPHĀTIS. Syrup of Phosphate of Iron. (*Ferri Sulphatis Granulatæ* gr.ccxxiv.; *Sodii Phosphatis* gr.cc.; *Sodii Bicarbonatis* gr.lvj.; *Acidi Phosphorici Concent.* fl.unc.j $\frac{1}{4}$; *Sacchari Albi* unc.viij.; *Aquæ Destillatæ* fl.unc.viij. Dissolve the sulphate of iron in four ounces of water, and the phosphate in the remainder; add the bicarbonate dissolved in a little water; and dissolve the precipitates in the phosphoric acid, filter the solution, and add the sugar. The product should measure twelve ounces. Fl.dr.j. contains gr.j. of anhydrous phosphate of iron $\text{Fe}_3(\text{PO}_4)_2$.)

Oper.—Hæmatic, tonic.

Use.—In all cases requiring chalybeates.

Dose.—Fl.dr.j.

SYRŪPUS HEMIDESMI. Syrup of Hemidesmus. (*Hemidesmi Rad. contusæ* unc.iv.; *Aquæ Destillatæ ferventis* Oj.; *Sacchari* unc.xxviij. Infuse the hemidesmus in water for four hours in a covered vessel, and strain. Let the sediment subside, decant the clear liquor, and, having added to it the sugar, dissolve with the aid of a gentle heat. The product should weigh two pounds ten ounces. Sp. gr. 1.335.)

Oper.—Demulcent, diaphoretic, tonic.

Use.—In the same cases as sarsaparilla.

Dose.—Fl.dr.j.

SYRŪPUS LIMŌNIS. Syrup of Lemons. (*Limonis Succī colati* Oj.; *Sacchari* lb.ij $\frac{1}{4}$; *Corticis Limonis recentis* unc.ij. The product should weigh lb.iiijss., and its sp. gr. should be 1.340.)

Oper.—Cooling, antiseptic.

Use.—To sweeten and acidulate barley water and other diluting fluids in inflammatory and other fevers. A useful addition to detergent gargles.

Dose.—Fl.dr.j.

Off. Prep.—*Liq. Magnesii Citratis.*

SYRŪPUS MŌRI. Syrup of Mulberry. (*Mori Succī* Oj.; *Sacchari* lb.ij $\frac{1}{4}$; *Spiritus Rectificati* fl.unc.ijss. Heat the juice to the boiling point, and filter it when cool. Dissolve the sugar in the juice with a gentle heat. Lastly, add the spirit. The product should weigh lb.iiij.unc.vj., and its sp. gr. should be 1.330.)

Oper.—Cooling.

Use.—For acidulating and sweetening diluting fluids in febrile diseases; and as an adjunct to gargles.

Dose.—Fl.dr.j.

SYRŪPUS PAPAVERIS. Syrup of Poppies. (*Papaveris Capsul. seminibus demptis* unc.xxxvj.; *Sacch. Purif.* lb.iv.; *Aquæ Destillatæ ferv.* q.s.; *Spiritus Rectificati* fl.unc.xvj. Macerate the capsules in the water in a water-bath for twenty-four hours, and percolate. Evaporate, press, and strain; reduce by evaporation to Oij., and when

cold, add the spirit. Distil off the spirit, evaporate the remaining liquor to two pints, then add the sugar. The product should weigh six pounds and a half, and its sp. gr. should be 1·330.)

Oper.—Anodyne, narcotic.

Use.—In catarrh, to abate coughing; and in the diseases of children to allay pain and procure sleep. The degree of strength of the preparation is very uncertain.

Dose.—Fl.dr.j. for an adult; min.xx. to min.xxx. for an infant, but should rarely be employed on account of its variable strength.

SYRŪPUS RHĒI. Syrup of Rhubarb. (*Rhei Radicis, Coriandri Fruct.*, āā unc.ij.; *Spir. Rectificati* fl.unc.vij.; *Sacchari Purificati* unc.xxiv.; *Aquæ Destillatæ ferventis* fl.unc.xxiv. Evaporate the liquid obtained by percolation to 14 ounces, then filter and dissolve the sugar in it with a gentle heat. The product should weigh nearly two pounds and a half, and its sp. gr. should be about 1·310.)

Oper.—Aperient and stomachic.

Use.—In constipation, in relaxed habits, especially among children.

Dose.—Fl.dr.j. to fl.dr.iv., for an adult.

SYRŪPUS RHŒADOS. Syrup of Red Poppy. (*Rhæados Petalorum* unc.xiiij.; *Aquæ Destillatæ* Oj. vel q.s.; *Sacch. Purif.* lb.ij½; *Spiritus Rectificati* fl.unc.ijss. To the water, heated in a water-bath, add the petals gradually, stirring occasionally; next remove the vessel, and macerate for twelve hours; then express the liquor, strain, and add the sugar so as to form a syrup, and, when cool, the spirit. The product should weigh lb.iiij. unc.x., and its sp. gr. should be 1·330.)

Use.—As a colouring agent.

Dose.—Fl.dr.j.

SYRŪPUS RŌSÆ GALLICÆ. Syrup of Red Roses. (*Rosæ Gallicæ Petal. siccata.* unc.ij.; *Aq. Destill. ferv.* Oj.; *Sacch. Purif.* unc.xxx. The product should weigh lb.ij. unc.xiv., and its sp. gr. should be 1·335.)

Oper.—Mildly astringent.

Use.—As an adjunct to stomachic infusions, and to gargles; but it is on account of its colour chiefly that it is valued.

Dose.—Fl.dr.j.

SYRŪPUS SCILLÆ. Syrup of Squill. (*Aceti Scillæ* Oj.; *Sacchari Purif.* lb.ij.ss. Dissolve with the aid of heat.)

Oper.—Diuretic, expectorant.

Use.—In the same cases as those for which the squill is employed.

Dose.—Fl.dr.ss. to fl.dr.j. for adults, min.x. to min.xxx. for children.

SYRŪPUS SENNÆ. Syrup of Senna. (*Sennæ contritæ* unc.xvj.; *Olei Coriandri* min.iiij.; *Sacchari Purif.* unc.xxiv.; *Aquæ Destillatæ* Ov. vel q.s.; *Spir. Rectificati* fl.unc.iiij. The weight of the product should be lb.ij. unc.x., and its sp. gr. 1·310.)

Oper.—Purgative.

Use.—For the constipation of children, and persons of a delicate habit of body.

Dose.—Fl.dr.j. to fl.dr.iv.

SYRŪPUS TOLŪTANUS. Syrup of Tolu. (*Balsami Tolutani* unc.j½; *Aq. Destill.* Oj. vel q.s.; *Sacch. Purif.* lb.ij. Boil the balsam for half an hour in a covered vessel, occasionally stirring; strain when cold,

and add sugar to the liquor, so as to form a syrup. The weight of the product should be lb. iij., and its sp. gr. 1·330.)

Oper.—A mild stimulant expectorant.

Use.—Simply to give its agreeable flavour to draughts, mixtures, and emulsions, especially in thoracic affection if not acute.

Dose.—Fl.dr.j.

SYRŪPUS ZINGIBĒRIS. Syrup of Ginger. (*Tincturæ Zingiberis* Fort. fl.dr.vj.; *Syrupi* fl.unc.xix. Mix.)

Oper.—Cordial, stomachic, carminative.

Use.—As an adjunct to bitter and tonic infusions.

Dose.—Fl.dr.j.

TABĀCI FOLĪA. Leaf Tobacco. (The dried leaves of *Nicotiana Tabacum*. N.O. *Solanaceæ*. America. ☉)

Prop.—Large, brown, ovate or lanceolate acuminate leaves, bearing numerous short glandular hairs. Odour of the dried leaves strong, fœtid, narcotic; taste bitter, extremely acrid. Active principles, a volatile oil, which is soluble both in water and alcohol, and *nicotine*, an alkaloid on which its virtues are supposed to depend.

Oper.—Narcotic, sedative, inducing intense muscular and vascular depression, diuretic, emetic, cathartic, errhine, a violent poison, whether externally applied, or taken into the stomach.

Use.—In ileus, and strangulated hernia, in the form of clyster of the infusion; in spasmodic asthma, dropsy, and dysuria; chewing it relieves the pain of toothache; and, as an errhine, it forms the basis of all the snuffs in common use. The infusion has been used as a lotion in scabies, tinea capitis, and other eruptions; but it is apt to induce sickness.

TABELLÆ NITROGLYCERINI. Tablets of Nitroglycerine. (Tablets of chocolate each weighing $2\frac{1}{2}$ gr. and containing $\frac{1}{100}$ th gr. of pure nitroglycerine.)

Use.—In angina pectoris, headache, neuralgia; also in sea-sickness.

Dose.—1 or 2 tablets.

TAMĀRINDUS. Tamarind. (The pulp of the fruit of *Tamarindus indica*. N.O. *Leguminosæ*. (*Fabaceæ*, Lindley.) West Indies. ♀)

Prop.—Inodorous; taste acid, sweet; juicy, when fresh and good; the seeds are hard; and the blade of a knife thrust into the pulp should not become coated with copper. The pulp contains citric acid, tartaric acid, bitartrate of potassium, gelatine, pectin, sugar, &c.

Oper.—Laxative, refrigerant.

Use.—In dysentery and fevers, particularly those attended with an increased secretion of bile. Tamarind whey, made by boiling unc.ij. of the fruit with Ojss. of milk, and straining, is an excellent diluent in fevers.

Dose.—Gr.lx. to gr.cxx., often added to senna and to manna.

Off. Prep.—*Confectio Sennæ*.

Incomp.—Carbonates, and acetates of potassium and sodium; the resinous cathartics; infusum sennæ.

TARAXĀCI RADIX. Dandelion Root. (The fresh and dried root of *Taraxacum officinale* (*Taraxacum Dens-leonis*). N.O. *Compositæ*. Indigenous. ♀)

Comp.—Resinous matters, sugar, gum, a bitter extractive from which *taraxacin* has been obtained; also mannite.

Prop.—Tap-shaped root, smooth and dark brown externally, white within, easily broken, yielding an inodorous bitter milky juice, becoming pale brown by exposure. Wrinkled when dry. Inodorous; taste at first slightly sweetish and acidulous, then bitter.

Oper.—Tonic, aperient, diuretic, resolvent.

Use.—In chronic inflammation, and functional and organic disease of the liver; chronic derangements of the stomach; dropsy; pulmonary tubercle; and jaundice. Employed only in the form of the official preparations.

Off. Prep.—*Decoctum Taraxaci.* *Extractum Taraxaci.* *Extractum Taraxaci Liquidum.* *Succus Taraxaci.*

TEREBINTHĪNA CANĀDENSIS. Canada Turpentine. *Syn.* Canada Balsam. (Obtained by puncturing or incising the bark of the trunk and branches of *Pinus balsamea* (*Abies balsamea*). N.O. *Coniferae*. (*Pinaceae*, Lindley.) Canada. *l*₂)

Comp.—Resin, volatile oil. The rectified oil is the *Camphine* of chemists.

Prop.—Odour penetrating; taste warm, pungent, bitterish; colour pale yellow; drying by exposure very slowly into a transparent adhesive varnish; solidifying when mixed with one-sixth of its weight of magnesia.

Oper.—Stimulant, diuretic, cathartic, astringent, rubefacient.

Use.—In chronic rheumatism, gleet, leucorrhœa, and nephritic affections; also in hæmoptysis.

Dose.—Gr.xx. to gr.xxx. in pill or bolus, united with powder of liquorice root; or emulsion, with mucilage or yolk of egg.

Off. Prep.—*Charta Epispastica.* *Collodium Flexile.*

TEREBINTHINÆ OLĒUM. Vide *Oleum Terebinthinæ*.

THERIĀCA. Treacle. (The uncrystallised residue of the refining of sugar.)

Prop.—Thick, brown, fermentable syrup; free from empyreumatic odour or flavour. Sp. gr. 1.40.

Oper.—Laxative, preservative, nutritive.

Use.—In combination with sulphur as an aperient; as a diet for children; to preserve meat in long voyages; to make pills.

Off. Prep.—*Pil. Aloes et Myrrhæ.* *Pil. Asafatidæ Comp.* *Pil. Conii*

Comp. *Pil. Ipecac. c. Scilla.* *Pil. Rhei Comp.* *Pil. Scillæ Comp.* *Tinct. Chlorof. et Morph.*

THUS AMERICĀNUM. Common Frankincense. (Concrete resinous exudation from *Pinus australis* (*Pinus palustris*) and *Pinus Tæda*. N.O. *Coniferae*.)

Prop.—Yellow colour, agreeable odour, on pressure yielding to the finger when fresh, becoming brittle and darker with age.

Use.—Externally as an ingredient of counter-irritant plasters in coughs, in lumbar pains and weakness, and in some diseases of joints.

Off. Prep.—*Emplastrum Picis.*

THYMOL. Thymol. (A stearoptene from the volatile oils of *Thymus vulgaris*, *Monarda punctata*, and *Carum Ajowan*. N.O. *Labiatae*.)

Comp.— $C_{10}H_{13}HO$.

Prop.—Thyme-like odour; pungent aromatic flavour; in large oblique prismatic crystals; slightly soluble in cold water, freely in alcohol and ether. Dissolved in half its bulk of glacial acetic acid, the

solution assumes a reddish-violet colour on the addition of an equal volume of sulphuric acid.

Oper.—Antiseptic.

Use.—As antiseptic dressing or spray; also for ringworm, psoriasis, eczema, and diphtheria.

Dose.—Gr.ss. to gr.ij.

TIGLII OLĒUM. Vide *Oleum Crotonis*.

TIN, GRANULATED. Vide *Stannum Granulatum*.

TINCTŪRA ACONITI. Tincture of Aconite. (*Aconiti Radicis crasse contritæ* unc.ijss.; *Spiritus Rectificati* Oj. Prepared by maceration and percolation.)

Oper. & Use.—Sedative and anodyne; in neuralgia and articular rheumatism.

Dose.—Min.v. to min.xv.

TINCTURA ALOËS. Tincture of Aloes. (*Aloes Socotrinæ crasse cont.* unc.ss.; *Ext. Glycyrrhizæ* unc.jss.; *Spir. Ten.* q.s. Macerate for seven days; then add sufficient proof spirit to make one pint.)

Oper. & Use.—The same as of the extract of aloes.

Dose.—Fl.dr.j. to fl.dr.ij.

TINCTŪRA ARNICÆ. Tincture of Arnica. (*Arnicæ Rhizomatis pulverizati* unc.j.; *Spiritus Rectificati* Oj. Prepared by maceration and percolation.)

Oper.—Stimulant, narcotic, diaphoretic; externally discutient.

Use.—In adynamic febrile affections, chronic rheumatism, paralysis, amaurosis, nervous headache, epilepsy; externally in sprains and bruises. Of doubtful value.

Dose.—Fl.dr.ss. to fl.dr.j.; externally fl.unc.j. to Oj. of fluid.

TINCTŪRA ASAFŒTIDÆ. Tincture of Asafoetida. (*Asafoetidæ in frustula contusæ* unc.ijss.; *Spir. Rectif.* q. s. Macerate for seven days, and filter, and add sufficient spirit to make a pint.)

Oper. & Use.—The same as of Asafoetida.

Dose.—Fl.dr.ss. to fl.dr.j. (It becomes turbid when mixed with water.)

TINCTŪRA AURANTII. Tincture of Orange Peel. (*Aurantii Cort.* unc.ij.; *Spir. Tenuioris* Oj. Prepared by maceration and percolation.)

Oper.—Stomachic, aromatic, tonic.

Use.—As an adjunct to bitter stomachic draughts.

Dose.—Fl.dr.j. to fl.dr.ij.

Off. Prep.—*Mistura Ferri Aromatica*. *Syrupus Aurantii*. *Tinctura Quininæ*.

TINCTŪRA AURANTII RECENTIS. Tincture of Fresh Orange Peel. (Macerate 6 ounces of thin slices of peel carefully cut in 18 fluid ounces of rectified spirit for a week; then, having poured off the liquor, pressed the dregs, and filtered, add sufficient spirit to complete the pint.)

Oper.—Tonic, carminative, astringent.

Use.—In dyspepsia, &c.

Dose.—Fl.dr.j. to fl.dr.ij.

TINCTŪRA BELLADONNÆ. Tincture of Belladonna. (*Belladonnæ Foliorum crasse contritorum* unc.j.; *Spiritus Tenuioris* Oj. Prepared by maceration and percolation.)

Oper.—Anodyne and sedative.

Use.—Seldom used internally, except in pertussis; externally in neuralgia, rheumatic pains, &c.

Dose.—Min.v. to min.xx. For a lotion fl.dr.j. to fl.unc.j. of water or any liniment.

TINCTŪRA BENZOÏNI COMPOSĪTA. Compound Tincture of Benzoin. (*Benzoini crasse contriti* unc.ij.; *Syracis præparati* unc.jss.; *Balsami Tolulani* unc.ss.; *Aloes Socotrinæ* gr.clx.; *Spiritus Rect.* Oj. Macerate for seven days, filter, and add sufficient spirit to make a pint.)

Oper.—Stimulant, expectorant, antispasmodic.

Use.—In old asthmatic cases; chronic catarrh; phthisis with a languid circulation. It is applied to wounds and chronic ulcers, which it stimulates gently, and protects from the action of the air.

Dose.—Fl.dr.ss. to fl.dr.jss. rubbed up with yolk of egg, and any fluid.

TINCTŪRA BUCHU. Tincture of Buchu. (*Buchu Foliorum contus.* unc.ijss.; *Spiritus Tenuioris* Oj. Prepared by maceration and percolation.)

Use.—The same as that of the leaves.

Dose.—Fl.dr.j. to fl.dr.ij.

TINCTŪRA CALUMBÆ. Tincture of Calumba. (*Calumbæ Rad. tenuiter concisæ* unc.ijss.; *Spir. Tenuior.* Oj. Prepared by maceration and percolation.)

Oper. & Use.—Aromatic, tonic, stimulant. The same as of the root; but more easily borne on the stomach than either the powder or the infusion. It may be prescribed with iron.

Dose.—Fl.dr.ss. to fl.dr.ij.

TINCTŪRA CAMPHŌRÆ COMPŌSĪTA. Compound Tincture of Camphor. (*Camphoræ* gr.xxx.; *Opii cont.*, *Acidi Benzoici*, āā gr.xl.; *Olei Anisi* fl.dr.ss.; *Spir. Ten.* Oj. Macerate for seven days, and strain.) One fl.dr. contains the soluble matter of $\frac{1}{4}$ gr. of opium.

Oper.—Anodyne, narcotic, diaphoretic.

Use.—In catarrh, after the inflammatory symptoms are abated, to allay the tickling cough; chronic asthma; pertussis; and in cases where quiet, rather than sleep, is required.

Dose.—Min.xv. to fl.dr.j. at bed-time; to children min.v. to min.xx. in almond mixture.

TINCTŪRA CANNĀBIS INDĪCÆ. Tincture of Indian Hemp. (*Ext. Cannabis Indicæ* unc.j.; *Spiritus Rectif.* Oj. Dissolve the extract in the spirit.) Should be given with mucilage to suspend the resin, which is precipitated on the addition of water. Alkaline fluids, formerly ordered with the same object, destroy the activity.

Oper.—Narcotic, anodyne. In small doses it exalts the mental powers, in larger doses it causes delirium; it does not dilate the pupil.

Use.—In neuralgia, dysmenorrhœa, chorea, tetanus, hydrophobia.

Dose.—Min.v. to min.xx.

TINCTŪRA CANTHĀRĪDIS. Tincture of Cantharides. (*Cantharidis contus.* unc. $\frac{1}{2}$; *Spir. Ten.* Oj. Macerate for seven days in a closed vessel, with occasional agitation; strain, press, filter, and add sufficient proof spirit to make one pint.)

Oper.—Diuretic, stimulant, narcotic.

Use.—In gleet, incontinence of urine, and leucorrhœa; but it is chiefly

used as an external application for rheumatic and other pains, united with *Soap* or *Camphor Liniment*.

Dose.—Min.v. to min.xx.

TINCTŪRA CAPSĪCI. Tincture of Capsicum. (*Capsici Fruct. contusi* unc.¼; *Spir. Rect.* Oj. Prepared by maceration and percolation.)

Oper.—Stimulant.

Use.—In the low stage of typhus, cynanche maligna, and other diseases of debility. In gargles in cynanche maligna.

Dose.—Min.x. to min.xx. Min.xxx. to fl.dr.ij. in a gargle of fl.unc.viij

TINCTŪRA CARDAMŌMI COMPŌSĪTA. Compound Tincture of Cardamoms. (*Cardam. Sem. contusorum*, *Carui Fruct. contusi*, āā unc.½; *Cocci contusi* gr.lv.; *Cinnam. Cort. cont.* unc.ss.; *Uvæ enucleatæ* unc.ij.; *Spir. Ten.* Oj. Prepared by maceration and percolation.)

Oper.—Stomachic, carminative.

Use.—An elegant adjunct to stomachic infusions, a good corrective to griping purgatives.

Dose.—Fl.dr.ss. to fl.dr.ij.

Off. Prep.—*Decoctum Aloes Compositum*. *Mistura Ferri Aromatica*. *Mistura Sennæ Composita*. *Tinctura Chloroformi Composita*.

TINCTŪRA CASCĀRILLÆ. Tincture of Cascarilla. (*Cascarille Cort. contusi* unc.ijss.; *Spir. Ten.* Oj. Prepared by maceration and percolation.)

Oper. & Use.—The same as of the bark.

Dose.—Fl.dr.ss. to fl.dr.ij. in any convenient vehicle.

TINCTŪRA CATĖCHU. Tincture of Catechu. (*Catechu contriti* unc.ijss.; *Cinnam. Cort. contusi* unc.j.; *Spir. Ten.* Oj. Macerate for seven days, strain, press, filter, and add sufficient proof spirit make one pint.)

Oper.—Astringent.

Use.—In chronic dysentery and diarrhœa; leucorrhœa.

Dose.—Fl.dr.ss. to fl.dr.ij. in wine, or some bitter infusion.

TINCTŪRA CHIRĀTÆ. Tincture of Chiretta. (*Chiratae contusæ* unc.ijss.; *Spiritus Tenuioris* Oj. Prepared by maceration and percolation.)

Oper.—Tonic, laxative.

Use.—In atonic dyspepsia.

Dose.—Fl.dr.ss. to fl.dr.ij.

TINCTŪRA CHLORŌFORMI COMPŌSĪTA. Compound Tincture of Chloroform. (*Chloroformi* fl.unc.ij.; *Spir. Rectificati* fl.unc.viij. *Tincturæ Cardamomi Compositæ* fl.unc.x. Mix.)

Oper.—Anodyne, stimulant, antispasmodic.

Use.—In hysteria, in depressed conditions of the nervous and circulatory systems, neuralgia, colic, etc.

Dose.—Min.xx. to min.lx.

TINCTURA CHLORŌFORMI ET MORPHĪNÆ. Tincture of Chloroform and Morphine. (*Chloroformi* fl.unc.j.; *Ætheris* fl.dr.ij.; *Spirit. Rect.* fl.unc.j.; *Morphinæ Hydrochloratis* gr.viij.; *Acid. Hydrocyan. Dil.* fl.unc.ss.; *Olei Menth. Pip.* min.iv.; *Extracti Glycyrrhizæ Liq.* fl.unc.j.; *Theriace* fl.unc.j.; *Syrupi* q.s. The volume should be made eight ounces by addition of syrup.)

Oper.—Sedative, narcotic.

Use.—As opium or its preparations.

Dose.—Min.v. to min.x.

TINCTŪRA CIMICIFUGÆ. Tincture of Cimicifuga. (*Cimicifugæ Rhiz. cont. unc.ijss.*; *Spir. Ten. Oj.* Prepared by maceration, percolation, and addition of sufficient proof spirit to make one pint.)

Oper.—Cardiac tonic, expectorant.

Use.—In rheumatic fever and chronic rheumatism; in bronchitis and chorea.

Dose.—Min.xv. to min.lx.

TINCTŪRA CINCHONÆ. Tincture of Cinchona. (*Cinchonæ Cort. cont. unc.iv.*; *Spir. Ten. Oj.* Prepared by maceration and percolation.)

Oper. & Use.—The same as of the bark; but owing to the quantity required to be exhibited to produce the effect of cinchona, the infusion or decoction is preferred.

Dose.—Fl.dr.ss. to fl.dr.ij.

TINCTŪRA CINCHONÆ COMPŌSĪTA. Compound Tincture of Cinchona. (*Cinchonæ Rubræ Cort. cont. unc.ij.*; *Aurantii Corticis concisi et contusi unc.j.*; *Serpentariæ Rhiz. unc.ss.*; *Croci gr.lv.*; *Cocci contriti gr.xxviiij.*; *Spir. Ten. Oj.* Prepared by maceration and percolation.)

Oper.—Tonic, antiperiodic, diaphoretic.

Use.—The same as the preceding; but it is more agreeable, and therefore more frequently used in dyspepsia; and as an adjunct to sulphate of quinine in ague.

Dose.—Fl.dr.ss. to fl.dr.ij.

TINCTŪRA CINNAMŌMI. Tincture of Cinnamon. (*Cinnamomi Cort. contusi unc.ijss.*; *Spirit. Rect. Oj.* Prepared by maceration and percolation.)

Oper.—Astringent, stomachic.

Use.—As an adjunct to astringent infusions; in chronic diarrhœa and dysentery; in dyspepsia, added to bitter infusions.

Dose.—Fl.dr.ss. to fl.dr.ij.

TINCTŪRA COCCI. Tincture of Cochineal. (*Cocci in pulverem redacti unc.ijss.*; *Spiritus Tenuioris Oj.* Macerate for seven days, strain, express, and filter.)

Use.—In pertussis and neuralgia on the continent, but chiefly as a colouring agent.

Dose.—Fl.dr.ss. to fl.dr.ij.

TINCTŪRA COLCHICI SEMĪNUM. Tincture of Colchicum Seeds. (*Colchici Seminum contusi unc.ijss.*; *Spiritus Tenuioris Oj.* Prepared by maceration and percolation.)

Oper. & Use.—The same as those of the dried bulb.

Dose.—From min.x. to fl.dr.ss.

TINCTŪRA CONĪL. Tincture of Hemlock. (*Conii Fructus contusi unc.ijss.*; *Spir. Ten. Oj.* Prepared by maceration and percolation.)

Use.—The same as that of the leaves and extract.

Dose.—Min.xx. to min.lx.

TINCTŪRA CROCI. Tincture of Saffron. (*Croci unc.j.*; *Spiritus Tenuioris Oj.* Prepared by maceration and percolation.)

Oper.—Stimulant, diaphoretic.

Use.—Only as a colouring agent.

TINCTŪRA CUBĒBÆ. Tincture of Cubebs. (*Cubebæ contritæ unc.ijss.*; *Spiritus Rectificati Oj.* Prepared by maceration and percolation.)

Oper.—Stimulant to mucous membrane ; especially that of the genito-urinary system.

Use.—In gonorrhœa, dysmenorrhœa.

Dose.—Fl.dr.ss. to fl.dr.ij.

TINCTŪRA CURCŪMÆ. Tincture of Turmeric. (*Appendix, B.P.*) (*Curcumæ contusæ unc.j.*; *Spiritus Tenuioris fl.unc.vj.* Macerate for seven days, and strain.)

Use.—As a test for alkalis, by which, when in solution, it is changed to yellow brown.

TINCTŪRA DIGITĀLIS. Tincture of Foxglove. (*Digitalis Fol. contusorum unc.ijss.*; *Spir. Ten. Oj.* Prepared by maceration and percolation.)

Oper. & Use.—The same as of the leaves. It is perhaps the best form under which this powerful remedy can be used, and its virtues longest preserved ; but it should be made with recently dried leaves.

Dose.—Min.x. gradually increased to min.xxx.

TINCTŪRA ERGŌTÆ. Tincture of Ergot. (*Ergotæ contusæ unc.v.*; *Spiritus Tenuioris Oj.* Prepared by maceration and percolation.)

Oper.—Stimulant, especially acting on the muscular system of the uterus.

Use.—In parturition when the pains languish, and the uterine action becomes torpid, provided the os be fully dilated, and the membranes ruptured. Also in post-partum hæmorrhage. In leucorrhœa and passive hæmorrhages. It is sometimes employed to arrest hæmoptysis.

Dose.—Min.v. to min.xxx. Min.xv. every three or four hours to suppress hæmorrhage. Min.xx. to fl.dr.ss. every half-hour to promote uterine contraction.

TINCTŪRA FERRI ACETĀTIS. Tincture of Acetate of Iron. (*Liquoris Ferri Acetat. Fort. fl.unc.v.*; *Acidi Acetici fl.unc.j.*; *Spir. Rect. fl.unc.v.*; *Aquæ Destill. fl.unc.ix.*)

Oper.—Tonic, astringent.

Use.—In dyspepsia, chlorosis, hysteria, cardiac disease.

Dose.—Min.v. to min.xxx.

TINCTŪRA FERRI PERCHLORĪDI. Tincture of Perchloride of Iron. *Syn. Tinctura Ferri Sesquichloridi.* (*Liquoris Ferri Perchloridi Fort. fl.unc.v.*; *Spiritus Rectificati fl.unc.v.*; *Aq. Destill. fl.unc.x.* Mix and preserve in a stoppered bottle.)

Oper.—Tonic, antispasmodic, emmenagogue, diuretic, styptic.

Use.—Similar to that of liquor ferri perchloridi. It is also applied as a styptic to bleeding vessels in cancerous and fungous sores.

Dose.—Min.x. to min.xxx.

Incomp.—Solution of lime, alkalis and their carbonates, magnesia ; astringent vegetable infusions and decoctions ; mucilage of acacia.

TINCTŪRA GALLÆ. Tincture of Galls. (*Gallæ contrit. unc.ijss.*; *Spir. Ten. Oj.* Prepared by maceration and percolation.)

Oper.—Astringent.

Use.—In intestinal hæmorrhages, and those of the prostate gland, obstinate protracted diarrhœa, and dysentery ; also in testing for the salts of iron.

Dose.—Fl.dr.ss. to fl.dr.ij.

- TINCTŪRA GELSEMI.** Tincture of Gelsemium. (*Gelsemii contrit. unc.ijsš.*; *Spir. Ten. Oj.* Macerate, percolate, and add sufficient spirit to make one pint.)
Oper.—Sedative, antineuralgic.
Use.—In neuralgia, rheumatism, and muscular spasm.
Dose.—Min.v. to min.xx.
- TINCTŪRA GENTIĀNÆ COMPŌSĪTA.** Compound Tincture of Gentian. (*Gentianæ Rad. contusæ unc.jss.*; *Aurant. Cort. contusi unc.¾*; *Cardam. Sem. contusi unc.¼*; *Spir. Ten. Oj.* Prepared by maceration and percolation.)
Oper.—Tonic, stomachic.
Use.—An adjunct to stomachic infusions.
Dose.—Fl.dr.ss. to fl.dr.ij.
- TINCTŪRA GUAĪĀCI AMMONIĀTA.** Ammoniated Tincture of Guaiacum. (*Guaiaci Resinæ cont. unc.iv.*; *Spir. Ammoniac Aromat. q.s.* Macerate in fifteen fluid ounces of aromatic spirit of ammonia for seven days, and filter, and add sufficient aromatic spirit of ammonia to make one pint.)
Oper.—Stimulant, sudorific, antispasmodic.
Use.—In chronic rheumatism and rheumatoid arthritis.
Dose.—Fl.dr. ss. to fl.dr.j. in milk, or any kind of viscid fluid.
Incomp.—Nitrous acid, sweet spirit of nitre, solution of chlorine.
- TINCTŪRA HYOSCYĀMI.** Tincture of Henbane. (*Hyoscyami Foliorum unc.ijsš.*; *Spir. Ten. Oj.* Prepared by maceration and percolation.)
Oper.—Narcotic, anodyne.
Use.—To produce sleep and quiet in those cases for which laudanum is used; it does not affect the head, nor occasion constipation.
Dose.—Fl.dr.ss. to fl.dr.j.
- TINCTŪRA IODI.** Tincture of Iodine. (*Iodi unc.ss.*; *Potassii Iodidi unc.ss.*; *Spiritus Rectificati Oj.* Dissolve the iodine and iodide in the spirit. Preserve the mixture in a closely stoppered vessel.)
Use.—In scrofula, bronchocele, and chlorosis.
Dose.—From min.v. to min.xx. in a little syrup and water three times a day.
Off. Prep.—*Vapor Iodi.*
- TINCTŪRA JABORANDI.** Tincture of Jaborandi. (*Jaborandi contrit. unc.v.*; *Spir. Ten. Oj.* Prepared by maceration and percolation.)
Oper.—Diaphoretic, sialagogue.
Use.—In coryza, acute bronchitis, dropsy. Also in uræmic convulsions.
Dose.—Fl.dr.ss. to fl.dr.j.
- TINCTŪRA JALĀPÆ.** Tincture of Jalap. (*Jalapæ crasse contritæ unc.ijss.*; *Spiritus Tenuioris Oj.* Prepared by maceration and percolation.)
Oper.—Cathartic.
Use.—As an adjunct to purgative draughts.
Dose.—Fl.dr.ss. to fl.dr.ij.
- TINCTŪRA KINO.** Tincture of Kino. (*Kino contriti unc.ij.*; *Glycerini fl.unc.ijj.*; *Aq. Dest. fl.unc.v.*; *Spir. Rect. fl.unc.xij.* Macerate for seven days, and strain.)

Oper.—Astringent.

Use.—In chronic diarrhœa, dysentery, leucorrhœa.

Dose.—Fl.dr.ss. to fl.dr.ij.

TINCTŪRA KRAMĒRĪÆ. Tincture of Rhatany. (*Krameria Radicis contritæ* unc.ijss.; *Spiritus Tenuioris* Oj. Prepared by maceration and percolation.)

Prop.—Astringent.

Use.—In diarrhœa, leucorrhœa, passive hæmorrhages, incontinence of urine.

Dose.—Fl.dr.ss. to fl.dr.ij.

TINCTŪRA LARĪCIS. Tincture of Larch. (*Laricis Cort. cont.* fl.unc.ijss.; *Spir. Rect.* Oj. Prepared by maceration and percolation.)

Oper.—Tonic and astringent.

Use.—In colliquative sweats, and as a tonic.

Dose.—Min.xx. to min.xxx.

TINCTŪRA LAVANDŪLÆ COMPŌSĪTA. Compound Tincture of Lavender. *Syn.* Spiritus Lavandulæ Compositus. (*Olei Lavandulæ* fl.dr.jss.; *Olei Rosmarini* min.x.; *Cinnamomi Cort. cont.*, *Myristicæ cont.*, āā gr.cl.; *Pterocarpi Cort. concisi* gr.ccc.; *Spiritus Rectificati* Oij. Macerate the cinnamon, nutmeg, and red sandal wood in spirit for seven days, then express, strain, dissolve the oils in the strained tincture, and add sufficient rectified spirit to make two pints.)

Use.—In fainting, hysteria, and in depression of the nervous system.

Dose.—Fl.dr.ss. to fl.dr.ij.

Off. Prep.—*Liquor Arsenicalis.*

TINCTŪRA LIMŌNIS. Tincture of Lemon Peel. (*Limonis Corticis recentis* unc.ijss.; *Spiritus Tenuioris* Oj. Macerate and strain.)

Prop.—Aromatic, stimulant.

Use.—To flavour medicines.

Dose.—Fl.dr.ss. to fl.dr.ij.

TINCTŪRA LOBĒLIÆ. Tincture of Lobelia. (*Lobeliæ contusæ* unc.ijss.; *Spiritus Ten.* Oj. Prepared by maceration and percolation.)

Use.—For the administration of lobelia in minute doses in spasmodic asthma.

Dose.—Min.x. to fl.dr.ss.

TINCTŪRA LOBĒLIÆ ÆTHĒRĒA. Ethereal Tincture of Lobelia. (*Lobeliæ contusæ* unc.ijss.; *Spir. Ætheris* Oj. Prepared by maceration.)

Use.—In asthma, chronic bronchitis, and the bronchitis of infants after the acute stage.

Dose.—For an adult min.x. to fl.dr.ss.; for an infant min.j. gradually increased till vomiting occurs.

TINCTŪRA LŪPŪLI. Tincture of Hop. (*Lupuli* unc.ijss.; *Spir. Ten.* Oj. Prepared by maceration and percolation.)

Oper.—Tonic, sedative.

Use.—In gout and rheumatism.

Dose.—Fl.dr.ss. to fl.dr. ij.

TINCTŪRA MYRRHÆ. Tincture of Myrrh. (*Myrrhæ contritæ* unc.ijss.; *Spir. Rect.* Oj. Prepared by maceration and percolation.)

Oper.—Tonic, expectorant, emmenagogue.

Use.—In the same cases as the powder; but it is chiefly used in gargles, united to infusion of roses and acids; applied to foul ulcers; and as a wash for the mouth when the gums are spongy.

Dose.—Fl.dr.ss. to fl.dr.j.

TINCTŪRA NUCIS VOMICÆ. Tincture of Nux Vomica. (*Extracti Nucis Vomice gr.xxxij.*; *Aq. Destil. fl.unc.iv.*; *Spir. Rect. q.s.* Mix sufficient spirit with the water to produce twenty fluid ounces, and dissolve the extract in the mixture.) Each fluid ounce contains 1 gr. of the alkaloids of nux vomica.

Oper. & Uses.—The same as Nux Vomica. (See *Extractum Nucis Vomice.*) A convenient way of administering the drug in solution.

Dose.—Min. x. to min. xx.

TINCTŪRA OPĪI. Tincture of Opium. (*Opīi contriti unc.jss.*; *Spir. Ten. Oj.* Macerate for seven days and strain. This tincture contains the soluble matter of thirty-three grains of opium, nearly, in an ounce.)

Oper.—Anodyne, narcotic.

Use.—To allay pain, relax spasm, and procure sleep. Externally it has a considerable effect when rubbed upon the skin.

Dose.—Min.v. to min.xl.

Incomp.—Solution of ammonia, caustic potash, caustic soda, carbonate of potassium, metallic salts, astringent vegetable infusions and decoctions, and perhaps belladonna, and hyoscyamus.

Off. Prep.—*Enema Opīi.* *Linimentum Opīi.*

TINCTŪRA OPĪI AMMONIĀTA. Ammoniated Tincture of Opium. (*Opīi contriti gr.c.*; *Croci minutim concisi, Acidi Benzoici, āā gr.clxxx.*; *Olei Anisi fl.dr.j.*; *Liquoris Ammonice Fortioris fl.unc.iv.*; *Spiritus Rectificati fl.unc.xvj.* Prepared by maceration.)

Oper.—Anodyne, antispasmodic.

Use.—In pertussis, and to allay the tickling cough in catarrh; flatulence, colic, &c.

Dose.—Fl.dr.ss. to fl.dr.j.

TINCTŪRA PHENOL-PHTHALEIN. Tincture of Phenol-Phthalein (Appendix B.P.) (*Phenol-phthalein gr.j.* *Spir. Ten. gr.d.* Dissolve; the solution should be colourless.)

Use.—This tincture gives an intense red colour with free potash or soda, and hence is employed as an indicator of the termination of volumetric reactions.

TINCTŪRA PODOPHYLLI. Tincture of Podophyllum. (*Podoph. Resinæ gr.clx.*; *Spir. Rect. Oj.* Dissolve and filter. It contains 1 gr. of the resin in 1 fluid drachm.)

Oper.—Purgative.

Use.—As the resin.

Dose.—Min.xv. to fl.dr.j.

TINCTŪRA PYRĒTHRI. Tincture of Pellitory. (*Pyrethri Radicis unc.iv.*; *Spir. Rect. Oj.* Prepared by maceration and percolation.)

Oper.—Stimulant and sialagogue.

Use.—Rarely if ever internally; as a local application in strumous affections of tonsils, toothache, &c.

TINCTŪRA QUASSIÆ. Tincture of Quassia. (*Quassie Ligni scobis unc.3.*; *Spiritus Tenuioris Oj.* Prepared by maceration.)

Oper.—Tonic, stomachic.

Use.—As an adjunct to stomachic infusions, or diluted with water in dyspepsia and other cases of debility.

Dose.—Fl.dr.ss. to fl.dr.ij.

TINCTŪRA QUINĪNÆ. Tincture of Quinine. (*Quinine Hydrochloratis* gr.clx.; *Tinct. Aurantii* Oj.)

Oper.—Tonic, aromatic, antiperiodic.

Use.—In intermittent fever, debility, and every case in which cinchona or quinine has been employed.

Dose.—Fl.dr.ss. to fl.dr.ij.

TINCTŪRA QUINĪNÆ AMMONIĀTA. Ammoniated Tincture of Quinine. (*Quinine Sulphatis* gr.clx.; *Liq. Ammon.* fl.unc.ijss.; *Spir. Ten.* fl.unc.xvijss.)

Oper.—Tonic, antiperiodic.

Use.—In all cases requiring the use of quinine, but when there is some objection to an acid mixture.

Dose.—Fl.dr.ss. to fl.dr.ij.

TINCTŪRA RHĒI. Tincture of Rhubarb. (*Rhei Rad. contusæ* unc.ij.; *Cardamomi Sem. contusorum*, *Coriandri Fruct. contusi*, *Croci*, sing. unc.½; *Spir. Ten.* Oj. Prepared by maceration and percolation.)

Dose.—Fl.dr.j. to fl.dr.ij. as a stomachic; fl.dr.iv. to fl.unc.j. as a purgative.

TINCTŪRA SABĪNÆ. Tincture of Savin. (*Sabine Cacumin. exsiccatorum et contusorum* unc.ijss.; *Spir. Ten.* Oj. Prepared by maceration and percolation.)

Oper.—Stimulant; emmenagogue; in large doses causes abortion; anthelmintic, escharotic.

Use.—Amenorrhœa, worms, gout? Externally to promote discharge from blistered surfaces.

Dose.—Min.xx. to fl.dr.j.

TINCTŪRA SCILLÆ. Tincture of Squill. (*Scille contusæ* unc.ijss.; *Spir. Ten.* Oj. Macerate and percolate.)

Oper. & Use.—The same as of the bulb in substance.

Dose.—Min.x. to min.xxx. in almond mixture, or mucilage.

TINCTŪRA SENĒGÆ. Tincture of Senega. (*Senegæ Rad. contusæ* unc.ijss.; *Spir. Ten.* Oj. Macerate and percolate.)

Oper.—Stimulant, expectorant, diaphoretic, diuretic.

Use.—In chronic bronchitis of weak persons, dysmenorrhœa, albuminuria.

Dose.—Fl.dr.ss. to fl.dr.ij.

TINCTŪRA SENNÆ. Tincture of Senna. (*Sennæ in frustula contusæ* unc.ijss.; *Carui Fruct. cont.* unc.ss.; *Coriandri Fruct.* unc.ss.; *Uvæ enucleatæ* unc.ij.; *Spir. Ten.* Oj. Macerate and percolate.)

Oper.—Stomachic, carminative, cathartic.

Use.—In flatulent colic; and to open the bowels in those who suffer from atonic gout, and whose bowels have been weakened by hard drinking. It is a useful adjunct to the infusion of senna.

Dose.—Fl.dr.j. to fl.dr.iv.

Off. Prep.—*Mistura Sennæ Composita.*

TINCTŪRA SERPENTARIÆ. Tincture of Serpentry. (*Serpentariæ Rhizomatis cont.* unc.ijss.; *Spir. Ten.* Oj. Macerate and percolate.)

Oper.—Tonic, stimulant, sudorific.

Use.—United with acid infusion of cinchona in typhoid fever; in gout; and periodic headache.

Dose.—Fl.dr.ss. to fl.dr.ij.

TINCTŪRA STRAMŌNĪ. Tincture of Stramonium. (*Stramonii Seminum contus. unc.ijss.*; *Spir. Ten. Oj.* Macerate and percolate.)

Prop.—Sedative, antispasmodic, narcotic.

Use.—In neuralgia, tic-douloureux, asthma, and spasmodic affections generally, excepting where symptoms of cerebral congestion or inflammation are present.

Dose.—Min.x. to min.xxx.

TINCTŪRA SUMBUL. Tincture of Sumbul. (*Sumbul Radicis cont. unc.ijss.*; *Spir. Rect. Oj.* Prepared by maceration and percolation.)

Oper.—Antispasmodic, stimulant.

Use.—In disease of the nervous system.

Dose.—Min.x. to min.xxx.

TINCTŪRA TOLUTĀNA. Tincture of Tolu. (*Balsami Tolutani unc.ijss.*; *Spir. Rect. q.s.* Macerate in fifteen fluid ounces of rectified spirit until the balsam is dissolved, strain, and add sufficient rectified spirit to make one pint.)

Oper.—Supposed to be expectorant.

Use.—Scarcely ever used except on account of its pleasant flavour.

Dose.—Min.xx. to min.xl.

Off. Prep.—*Trochisci Acidi Tannici. Trochisci Morphine. Trochisci Morphine et Ipecacuanhe. Trochisci Opii.*

TINCTŪRA VALERIĀNÆ. Tincture of Valerian. (*Valeriane Rhiz. cont. unc.ijss.*; *Spir. Ten. Oj.* Macerate and percolate.)

Oper.—Stimulant, antispasmodic.

Use.—In nervous and spasmodic affections; but it has less efficacy than the powder.

Dose.—Fl.dr.j. to fl.dr.ij.

TINCTŪRA VALERIĀNÆ AMMONIĀTA. Ammoniated Tincture of Valerian. (*Valeriane Rhiz. unc.ijss.*; *Spir. Ammonice Aromat. Oj.* Macerate for seven days and strain.)

Oper. & Use.—The same as of the former; but, on account of the ammonia, this is more useful in hysteria.

Dose.—Fl.dr.ss. to fl.dr.j. in milk, or some bland fluid.

TINCTŪRA VERĀTRI VĪRĪDIS. Tincture of Green Hellebore. (*Veratri Viridis Rhiz. unc.iv.*; *Spir. Rect. Oj.* Prepared by maceration and percolation.)

Oper.—Purgative, sedative to the arterial system.

Use.—In some affections of liver, gout, &c.

Dose.—Min.v. to min.xx.

TINCTŪRA ZINGIBĒRIS. Tincture of Ginger. (*Zingiberis contus. unc.ijss.*; *Spir. Rect. Oj.* Prepared by maceration and percolation.)

Oper.—Stimulant, carminative.

Use.—In atonic gout, when it attacks the stomach; flatulencies; and as a corrigent to griping purgatives.

Dose.—Min.xv. to fl.dr.j.

TINCTŪRA ZINGIBĒRIS FORTIOR. Strong Tincture of Ginger. *Syn.* Essence of Ginger. (*Zingiberis in pulverem subtilissimum redacti*

unc.x.; *Spiritus Rect.* q.s. Percolate, and add sufficient spirit to the percolation to make one pint.)

Oper. & Use.—The same as the former.

Dose.—Min.v. to min.xx.

Off. Prep.—*Acidum Sulphuricum Aromaticum. Pilula Scammonii Composita. Syrupus Zingiberis.*

TRAGACANTHA. *Tragacanth.* (Gummy exudation from the stem of *Astragalus gummifer* and other species of *Astragalus*. N. O. *Leguminosæ.* (*Fabacæ, Lindley.*) Asia Minor. b)

Prop.—Inodorous; nearly tasteless; colour white or yellowish; flaky pieces, irregularly oblong or roundish, marked by concentric ridges; tough, pulverisable at 120° F. (48°·9 C.); does not form a smooth uniform mucilage with water.

Comp.—Arabin 53 per cent. soluble in water, bassorine 33 per cent. insoluble in water, starch, &c.

Oper.—Demulcent.

Use.—Small quantities held in the mouth, and swallowed very slowly, sheath the fauces and allay tickling cough. Given in gonorrhœa, irritable bladder, strangury; but it is chiefly used for pharmaceutical purposes.

Dose.—Gr.x. to gr.lx.

Incomp.—Sulphate of copper, acetate of lead, and sulphate of iron precipitate its mucilage.

Off. Prep.—*Confectio Opii. Confectio Sulphuris. Glycerin. Tragacanthæ. Mucilago Tragacanthæ. Pulv. Opii Compositus. Pulv. Tragacanthæ Comp.*

TROCHISCI ACIDI BENZOICI. Benzoic Acid Lozenges. (*Acidi Benzoici* gr.cccx.; *Sacch. Purif.* unc.xxv.; *Acaciæ Gummi cont.* unc.j.; *Mucilag. Acac.* fl.unc.ij.; *Aq. Destill.* q.s. To be made into 720 lozenges, each of which will contain gr.ss. of benzoic acid.)

Oper.—Diuretic, expectorant.

Use.—In bronchitis and catarrh.

Dose.—One to five.

TROCHISCI ACIDI TANNICI. Tannic Acid Lozenges. (*Acidi Tannici* gr.cccx.; *Tincturæ Tolutanæ* fl.unc.ss.; *Sacchari Purif.* unc.xxv.; *Acaciæ Gummi contriti* unc.j.; *Mucilaginis Acaciæ* fl.unc.ij.; *Aque Destillatæ* fl.unc.j. To be made into 720 lozenges, containing gr.ss. of tannic acid in each lozenge.)

Oper.—Astringent.

Use.—In all cases in which tannic acid is indicated, especially in relaxed throat.

Dose.—One to six.

TROCHISCI BISMUTHI. Bismuth Lozenges. (*Bismuthi Subnitratæ* gr.mcccxl.; *Magnesi Carbonatis* unc.iv.; *Calcii Carbonatis Præcipitata* unc.vj.; *Sacchari Purif.* unc.xxix.; *Acaciæ Gummi contriti* unc.j.; *Mucilaginis Acaciæ* fl.unc.ij.; *Aque Rosæ* q.s. Mix the dry ingredients, then add the mucilage, and form the whole into a proper mass with rose-water. Divide into 720 lozenges, each containing gr.ij. of subnitrate of bismuth.)

Oper. & Use.—Sedative in pyrosis and cases of irritable stomach.

Dose.—One to six.

TROCHISCI CATĖCHU. Catechu Lozenges. (*Catechu contriti* gr.dcxxx.; *Sacchari Purif.* unc.xxv.; *Acaciæ Gummi contriti* unc.j.;

Mucilaginis Acaciæ fl.unc.ij.; *Aq. Destil.* q.s. Make into 720 lozenges. Each lozenge contains gr.j. of catechu.)

Oper.—Astringent.

Use.—In relaxation of throat, pyrexia, diarrhœa, &c.

Dose.—One to six.

TROCHISCI FERRI REDACTI. Reduced Iron Lozenges. (*Ferri Redacti* gr.lccxx.; *Sacchari Purif.* unc.xxv.; *Acaciæ Gummi contriti* unc.j.; *Mucilaginis Acaciæ* fl.unc.ij.; *Aque Destillatæ* fl.unc.j. vel q.s. Make into 720 lozenges. Each lozenge contains gr.j. of reduced iron.)

Oper.—Chalybeate, tonic, emmenagogue.

Use.—In anæmia and chlorosis.

Dose.—One to six.

TROCHISCI IPĖCACŪANHÆ. Ipecacuanha Lozenges. (*Ipecacuanhæ contritæ* gr.clxxx.; *Sacchari Purif.* unc.xxv.; *Acaciæ Gummi contriti* unc.j.; *Mucilaginis Acaciæ* fl.unc.ij.; *Aque Destillatæ* fl.unc.j. vel q.s. Make into 720 lozenges. Each lozenge contains gr.¼ of ipecacuanha.)

Oper.—Expectorant, diaphoretic.

Use.—In catarrhal cough.

Dose.—One to three.

TROCHISCI MORPHINÆ. Morphine Lozenges. (*Morphinæ Hydrochloratis* gr.xx.; *Tincturæ Tolulanæ* fl.unc.ss.; *Sacchari Purif. contriti* unc.xxiv.; *Acaciæ Gummi contriti* unc.j.; *Mucilaginis Acaciæ* q.s.; *Aque Destillatæ* fl.unc.ss. Dissolve the hydrochlorate in the water, mix it and the tincture of tolu with the sugar and gum, and form into 720 lozenges with mucilage. Each lozenge contains gr.⅓ of hydrochlorate of morphine.)

Oper.—Anodyne, soporific.

Dose.—One to six.

TROCHISCI MORPHINÆ ET IPĖCACŪANHÆ. Morphine and Ipecacuanha Lozenges. (*Morphinæ Hydrochloratis* gr.xx.; *Ipecac. pulv.* gr.lx.; *Tincturæ Tolulanæ* fl.unc.ss.; *Sacchari Purif. contriti* unc.xxiv.; *Acaciæ Gummi contriti* unc.j.; *Mucilaginis Acaciæ* q.s.; *Aque Destillatæ* fl.unc.ss. Make into 720 lozenges, each containing gr.⅓ of hydrochlorate of morphine, and gr.⅓ of ipecacuanha.)

Use.—A substitute for Dover's powder.

Dose.—One to six.

TROCHISCI OPĖI. Opium Lozenges. (*Ext. Opii* gr.lxxij.; *Tinct. Tolulanæ* fl.unc.ss.; *Sacchari Purif. contriti* unc.xvj.; *Acaciæ Gummi contriti* unc.ij.; *Ext. Glycyrrhizæ* unc.vj.; *Aque Destillatæ* q.s. Divide into 720 lozenges, each containing extract of opium gr.⅓, or gr.⅓ of morphine.)

Oper.—Demulcent, anodyne.

Use.—For allaying the irritation of the fauces producing cough, in protracted catarrhs.

Dose.—One to six.

TROCHISCI POTASSII CHLORATIS. Chlorate of Potassium Lozenges. (*Potassii Chloratis contritæ* unc.viii.gr.c.; *Sacchari Purif. cont.* unc.xxv.; *Acaciæ Gummi contriti* unc.j.; *Mucilaginis Acaciæ* fl.unc.ij.; *Aque Destillatæ* fl.unc.j. vel q.s. Make and divide into 720 lozenges. Each lozenge contains gr.v. of chlorate of potassium.)

Oper.—Detergent, stimulant.

Use.—In affections of mouth and throat, especially when of follicular character.

Dose.—One to six.

TROCHISCI SANTONINI. Santonin Lozenges. (*Santonini* gr. dccxx.; *Sacch. Purif. cont.* unc. xxv.; *Acac. Gummi cont.* unc. j.; *Mucilag. Acaciæ* fl. unc. ij.; *Aq. Destill.* q.s. Make 720 lozenges. Each lozenge contains gr. j. of santonin.)

Oper.—Anthelmintic.

Use.—For round worm.

Dose.—One to six.

TROCHISCI SODII BICARBONATIS. Bicarbonate of Sodium Lozenges. (*Sodii Bicarbonatis contritæ* unc. viij. gr. c.; *Sacchari Purif. cont.* unc. xxv.; *Acaciæ Gummi contriti* unc. j.; *Mucilag. Acaciæ* fl. unc. ij.; *Aquæ Destillatæ* fl. unc. j. Make into 720 lozenges. Each lozenge contains gr. v. of bicarbonate of sodium.)

Oper.—Antacid.

Use.—In acidity of stomach, dyspepsia.

Dose.—One to six.

TURMERIC PAPER AND TINCTURE. Vide *Curcuma*.

UNGUENTUM ACIDI BORICI. Ointment of Boric Acid. *Syn.* Ointment of Boracic Acid. (*Acidi Borici* unc. ijss.; *Paraffini Moll.* unc. x.; *Paraffini Duri* unc. v.)

Oper. & Use.—As antiseptic dressing in surgery.

UNGUENTUM ACIDI CARBOLICI. Ointment of Carbolic Acid. (*Acidi Carbolici* part. j.; *Paraffini Moll.* part. xij.; *Paraffini Duri* part. vj.)

Oper. & Use.—As antiseptic dressing in surgery.

UNGUENTUM ACIDI SALICYLICI. Ointment of Salicylic Acid. (*Acidi Salicylici* part. j.; *Paraffini Moll.* part. xvij.; *Paraffini Duri* part. ix.)

Oper. & Use.—As antiseptic dressing in surgery.

UNGUENTUM ACONITINÆ. Ointment of Aconitine. (*Aconitine* gr. viij.; *Spir. Rectificati* fl. dr. ss.; *Adipis præparati* unc. j.)

Oper.—Sedative, anodyne.

Use.—In neuralgia, chronic rheumatism.

UNGUENTUM ANTIMONII TARTARATI. Ointment of Tartarated Antimony. (*Antimonii Tartarati in pulv. subtilissimum triti* unc. ʒ; *Unguenti Simplicis* unc. j.)

Oper.—As a topical stimulant to cause a pustular eruption on the skin, and produce counter-irritation.

Use.—In internal inflammations, especially of the chest, and rheumatism and chronic inflammation of the joints.

UNGUENTUM ATRÖPINÆ. Ointment of Atropine. (*Atropine* gr. viij.; *Spir. Rectificati* fl. dr. ss.; *Adipis Benzoati* unc. j. Dissolve the atropine in the spirit, and add the lard.)

Oper.—Anodyne, causing dilatation of the pupil.

Use.—In neuralgia, and in ophthalmic cases to dilate the pupil.

UNGUENTUM BELLADONNÆ. Ointment of Belladonna. (*Ext. Belladonnæ Alcohol.* gr. l.; *Adipis Benzoati* unc. j.)

Oper.—Anodyne; relaxing muscular fibre.

Use.—In painful ulcers, hæmorrhoidal affections, chordee, ascites, rheumatism, and applied round the eye to cause dilatation of the pupil.

UNGUENTUM CALAMINÆ. Ointment of Calamine. (*Calaminæ Præpar. unc.j.*; *Adipis Benzoati unc.v.*)

Oper.—Sedative, astringent.

Use.—In eczema.

UNGUENTUM CANTHÄRĪDIS. Ointment of Cantharides. (*Cantharidis unc.j.*; *Ceræ Flavæ unc.j.*; *Olei Olivæ fl.unc.vj.* Digest the cantharides in the oil, then heat by means of a water-bath, strain, and mix well with previously melted wax.)

Oper.—Irritant.

Use.—To keep open issues and blisters.

UNGUENTUM CETĀCEI. Ointment of Spermaceti. (*Cetacei unc.v.*; *Ceræ Albæ unc.ij.*; *Olei Amygdalæ Oj.*; *Benzoini cont. unc.ss.* Melt them with a slow fire and stir till cold.)

Use.—The ordinary dressing for blistered parts and excoriations.

UNGUENTUM CHRYSAROBĪNI. Ointment of Chrysarobin. (*Chrysarobini part.j.*; *Adipis Benzoati part.xxiv.*)

Oper.—Antiparasitic, alterative.

Use.—In psoriasis, eczema, ringworm, &c.

UNGUENTUM CREASŌTI. Ointment of Creasote. (*Creasoti fl.dr.j.*; *Unguenti Simplicis unc.j.*)

Oper.—Stimulant.

Use.—As a counter-irritant, and as an application in porrigo scutulata.

UNGUENTUM ELĒMI. Ointment of Elemi. (*Elemi unc.½*; *Unguenti Simplicis unc.j.* Melt, strain through flannel, and stir till cold.)

Oper.—Stimulant.

Use.—To keep open issues and setons, and as a dressing for ulcers which do not admit of the application of adhesive straps.

UNGUENTUM EUCALYPTI. Ointment of Eucalyptus. (*Olei Eucalypti (pondere) unc.j.*; *Paraff. Moll., Paraff. Duri, āā unc.ij.*)

Oper.—Antiseptic.

Use.—To correct fœtor, as surgical dressing.

UNGUENTUM GALLÆ. Ointment of Galls. (*Gallæ subtilissime contritæ gr.lxxx.*; *Adipis Benzoati unc.j.* Mix.)

Oper.—Astringent.

Use.—Hæmorrhoids.

UNGUENTUM GALLÆ CUM OPĪO. Ointment of Galls and Opium. (*Unguenti Gallæ unc.j.*; *Opii contriti gr.xxxij.* Mix.)

Oper.—Astringent and sedative.

Use.—As an application in piles.

UNGUENTUM GLYCĚRĪNI PLUMBI SUBACETĀTIS. Ointment of Glycerine of Subacetate of Lead. (*Glycerini Plumbi Subacet. unc.ivss.*; *Paraff. Moll. unc.xviiij.*; *Paraff. Duri unc.vj.*)

Oper.—Astringent, sedative.

Use.—In eczema, &c., as a soothing application.

UNGUENTUM HYDRARGYRI. Ointment of Mercury. (*Hydrargyri lb.j.*; *Seri Præparati unc.j.*; *Adipis Præparati lb.j.* Rub together till the globules disappear.)

Oper.—Antisymphilitic, alterative, discutient.

Use.—In venereal affections, when it is wished to get a large portion of mercury speedily into the system without affecting the bowels; and where there are local affections, as bubo. In some forms of fever, pneumonia, inflammation within the abdomen, when mercury internally cannot be borne. The diluted ointment is used as a topical dressing to venereal ulcers, erysipelas of the face, &c.

Dose.—Gr. lx. is introduced by friction upon the inside of the thigh, or the fore-arm, every night, till the system is affected.

Off. Prep.—*Linimentum Hydrargyri. Suppositoria Hydrargyri. Unguentum Hydrargyri Compositum.*

UNGUENTUM HYDRARGYRI AMMŌNIATI. Ointment of Ammoniated Mercury. *Syn.* Ointment of White Precipitate. (*Hydrargyri Ammoniatii* part. j.; *Unguentsi Simplicis* part. ix.)

Oper.—Stimulant and antiparasitic.

Use.—In porrigo and impetigo of the scalp, scabies.

UNGUENTUM HYDRARGYRI COMPŌSITUM. Compound Ointment of Mercury. (*Unguentsi Hydrargyri* unc. vj.; *Ceræ Flavæ, Olei Olivæ*, āā unc. iij.; *Camphoræ* unc. jss. Melt the wax with a gentle heat, and add the oil, and when nearly cold, add the camphor in powder, and the mercurial ointment, and mix thoroughly.)

Oper.—Antisymphilitic, alterative, discutient, but more stimulating than the previous preparation; the camphor aids the action of the mercury.

Use.—In internal inflammation, where mercurial action is required, and the constitution is feeble.

UNGUENTUM HYDRARGYRI IODIDI RUBRI. Ointment of Red Iodide of Mercury. (*Hydrargyri Iodidi Rubri in pulverem subtilissimum redacti* gr. xvj.; *Unguentsi Simplicis* unc. j.)

Oper. & Use.—Stimulant, as a dressing in scrofulous and sluggish ulcers.

UNGUENTUM HYDRARGYRI NITRĀTIS. Ointment of Nitrate of Mercury. *Syn.* Unguentum Citrinum. (*Hydrargyri (pondere)* unc. iv.; *Acidii Nitrici* fl. unc. xij.; *Adipis Preparati* unc. xv.; *Olei Olivæ* fl. unc. xxxij. Dissolve the mercury in the acid with the aid of a little heat. Melt the lard with the oil, and while the mixture is hot, add to it the solution of mercury, also hot. Let the temperature of the mixture next be raised so as to cause effervescence, and then, withdrawing the heat, stir the mixture until it is cold.)

UNGUENTUM HYDRARGYRI NITRĀTIS DĪLUTUM. Diluted Ointment of Nitrate of Mercury. (*Unguentsi Hydrargyri Nitratis* unc. j.; *Paraffini Moll.* unc. ij.)

Prop.—These two ointments are the same, except in point of strength; they are of a greenish-golden colour; and when old, become hard.

Oper.—Stimulant, detergent.

Use.—The stronger ointment is used as an application to herpes, porrigo, and other cutaneous eruptions. The weaker is applied, by means of a hair pencil, to the edges of the eyelids, in ophthalmia, and ulcerations of the tarsi.

UNGUENTUM HYDRARGYRI OXIDI RUBRI. Ointment of Red Oxide of Mercury. (*Hydrargyri Oxidi Rubri in pulverem subtilissimum redacti* gr. lxij.; *Paraff. Moll.* unc. 3; *Paraff. Duri* unc. 4. Melt the

paraffins together, and, when the mixture begins to thicken in cooling, add the red oxide.)

Oper.—Stimulant, escharotic.

Use.—For indolent foul ulcers, especially for those remaining after the removal of the scab of rupia; for inflammation of the conjunctiva, with a thickening of the inner membrane of the palpebræ; and for specks of the cornea.

UNGUENTUM HYDRARGYRI SUBCHLORIDI. Ointment of Subchloride of Mercury. (*Hydrargyri Subchloridi* gr.lxxx.; *Adipis Benzoi* unc.j.)

Oper.—Antisyphilitic, alterative, discutient.

Use.—In venereal affections, when it is desired to get a large portion of mercury rapidly into the system, in hepatic enlargement, &c.

UNGUENTUM IODI. Ointment of Iodine. (*Iodi* gr.xxxij.; *Potassii Iodidi* gr.xxxij.; *Glycerini* fl.dr.j.; *Adipis Præparati* unc.ij. Rub the iodine and iodide of potassium well together, with the glycerine, add the lard gradually, and mix.)

Use.—As an application to scrofulous tumours and bronchocele.

UNGUENTUM IODOFORMI. Ointment of Iodoform. (*Iodoformi* unc.j.; *Adipis Benzoi* unc.ix.)

Oper.—Antiseptic.

Use.—As surgical dressing, and to correct fætor.

UNGUENTUM PICIS LIQUIDÆ. Ointment of Tar. (*Picis Liquidæ* unc.v.; *Ceræ Flavæ* unc.ij. Melt the wax, add the tar, and mix.)

Oper.—Stimulant, detergent.

Use.—In lepra and scaly eruptions, in foul ulcers.

UNGUENTUM PLUMBI ACETATIS. Ointment of Acetate of Lead. (*Plumbi Acetatis in pulverem subtilissimum reductæ* gr.xij.; *Adipis Benzoi* unc.j.)

Oper.—Astringent, cooling, sedative.

Use.—In irritable, inflamed sores.

UNGUENTUM PLUMBI CARBONATIS. Ointment of Carbonate of Lead. (*Plumbi Carbonatis in pulverem subtilissimum reductæ* gr.lxij.; *Unguenti Simplicis* unc.j.)

Use.—In burns and irritable sores.

UNGUENTUM PLUMBI IODIDI. Ointment of Iodide of Lead. (*Plumbi Iodidi in pulverem subtilissimum reducti* gr.lxij.; *Unguenti Simplicis* unc.j. Mix.)

Oper.—Alterative, stimulant.

Use.—In glandular affections and enlargement of the joints.

UNGUENTUM POTASSÆ SULPHURATÆ. Ointment of Sulphurated Potash. (*Potassæ Sulphuratæ* gr.xxx.; *Paraff. Duri* unc.½; *Paraff. Moll.* unc.¾. Triturate the sulphurated potash, and add the hard and soft paraffins previously melted and mixed. It should always be recently prepared.)

Oper.—Antiparasitic, detergent.

Use.—In chronic cutaneous diseases, as scabies and psoriasis.

UNGUENTUM POTASSII IODIDI. Ointment of Iodide of Potassium. (*Potassii Iodidi* gr.lxiv.; *Adipis Benzoi* unc.j.; *Potassii Carb.* gr.i.v.; *Aquæ* fl.dr.j. Dissolve the iodide and carbonate in the water, and mix it with the lard.)

Use.—As an application to scrofulous tumours and bronchocele.

UNGUENTUM PRÆCIPITĀTI ALBI. See *Unguentum Hydrargyri Ammoniati*.

UNGUENTUM RESINÆ. Ointment of Resin. (*Resinæ unc.viiij.*; *Ceræ Flavæ unc.iv.*; *Unguenti Simplicis unc.xvj.*; *Olei Amygd. fl.unc.ij.* Melt them together, strain, while hot, through flannel, and stir till they concreate.)

Oper.—Digestive, detergent.

Use.—For cleansing and healing sluggish ulcers.

UNGUENTUM SABINÆ. Ointment of Savin. (*Sabinæ Cacuminum contusorum recentum unc.viiij.*; *Ceræ Flavæ unc.iiij.*; *Adipis Benzoati unc.xvj.* Mix the savin with the lard and wax, melted together, then strain through calico.)

Oper.—Irritative, topical stimulant.

Use.—To keep up a discharge from a blistered surface.

UNGUENTUM SIMPLEX. Simple Ointment. (*Olei Amygdalæ fl.unc.iiij.*; *Adipis Benzoati unc.iiij.*; *Ceræ Albæ unc.ij.* Melt together.)

Oper.—Emollient.

Use.—For softening the skin, and healing chaps.

Off. Prep.—*Unguentum Antimonii Tartarati*. *Unguentum Creasoti*. *Unguentum Elemi*. *Unguentum Hydrargyri Ammoniati*. *Unguentum Hydrargyri Iodidi Rubri*. *Unguentum Plumbi Carbonatis*. *Unguentum Plumbi Iodidi*. *Unguentum Resinæ*.

UNGUENTUM STAPHISAGRIÆ. Ointment of Stavesacre. (*Staphisagrice Semen unc.iv.*; *Adipis Benzoati unc.viiij.* Crush the seeds, macerate them in lard over a water-bath for two hours, and then strain. Contains 10 per cent. of oil of stavesacre.)

Oper.—Parasiticide.

Use.—To destroy pediculi.

UNGUENTUM SULPHŪRIS. Ointment of Sulphur. (*Sulphuris Sublimati unc.j.*; *Adipis Benzoati unc.iv.* Mix.)

Oper.—Stimulant, alterative.

Use.—In itch; the fourth part of the body should be well rubbed with the ointment every night, till the symptoms disappear. Sulphur should be taken internally at the same time.

UNGUENTUM SULPHŪRIS IODIDI. Ointment of Iodide of Sulphur. (*Sulphuris Iodidi gr.xxx.*; *Paraff. Duri unc.¼*; *Paraff. Moll. unc.¾*. Triturate the iodide, and gradually add the melted mixture of the paraffins.)

Oper.—Alterative and resolvent.

Use.—In chronic cutaneous diseases, as lepra, porrigo, acne indurata.

UNGUENTUM TĒRĒBINTHINÆ. Ointment of Turpentine. (*Olei Terebinthinæ fl.unc.j.*; *Resinæ crasse contritæ gr.liv.*; *Ceræ Flavæ unc.ss.*; *Adipis Præparati unc.ss.* Melt by the aid of a steam- or water-bath.)

Oper.—Stimulant.

Use.—In cases of chronic ulcers, burns, &c.

UNGUENTUM VERĀTRINÆ. Ointment of Veratrine. (*Veratrinæ gr.viiij.*; *Paraff. Duri unc.¼*; *Paraff. Moll. unc.¾*; *Olei Olivæ fl.dr.j.*)

Oper.—Stimulant.

Use.—In neuralgia, scabies, and other cutaneous affections.

UNGUENTUM ZINCI. Ointment of Zinc. (*Zinci Oxidi* gr.lxxx.; *Adipis Benzoiati* unc.j. Add the oxide to the benzoated lard, previously melted. Mix.)

Oper.—Astringent, stimulant.

Use.—In ophthalmia, excoriated nipples, eczema, &c.

UNGUENTUM ZINCI OLEATI. Ointment of Oleate of Zinc. (*Zinci Oleati* unc.j.; *Paraff. Moll.* unc.j. Mix with heat and stir until nearly cold.)

Oper. & Use.—Like unguentum zinci, but more astringent from its greater power of absorption.

UVÆ. Raisins. *Syn.* Uvæ Passæ. (Dried ripe fruit of *Vitis vinifera*. N.O. *Vitaceæ*. Imported from Spain. $\frac{1}{2}$)

Prop.—Inodorous; taste subacidulous, sweet, mucilaginous.

Oper.—Demulcent, nutritive.

Use.—As the food of the phthisical, and as an acidulous adjunct to the beverages of the sick.

Off. Prep.—*Tinctura Cardamomi Comp.* *Tinctura Sennæ.*

UVÆ URSI FOLIA. Bearberry Leaves. (*Arctostaphylos Uva-ursi*, Red-berried Trailing Whortleberry. N.O. *Ericaceæ*. Indigenous. $\frac{1}{2}$)

Prop.—Obovate entire coriaceous shining leaves, about $\frac{3}{4}$ inch in length, reticulated, not dotted beneath, nor toothed on margin; feeble hay-like odour when powdered; taste very astringent; yields its virtues to alcohol.

Comp.—Tannic and gallic acids, mucilage, resin, extractive, traces of soda and lime.

Oper.—Tonic, astringent, and slightly diuretic.

Use.—In chronic diarrhœa and dysentery; catarrh of bladder; leucorrhœa and diabetes. It has been celebrated in calculous and nephritic complaints; but it appears to act in the same manner as other astringents, by merely allaying the pain and irritability of the bladder? In phthisis?

Dose.—Of the powder gr.xv. to gr.xxx.

Incomp.—Salts of iron, tartar emetic, nitrate of silver, salts of lead, infusion of cinchona bark.

Off. Prep.—*Infusum Uvæ Ursi.*

VALERIĀNÆ RHIZŌMA. Valerian rhizome and rootlets dried. Indigenous and cultivated. (*Valeriana officinalis*. N.O. *Valerianaceæ*. $\frac{1}{2}$)

Comp.—A volatile oil, valerianic acid, extractive, resin, starch, mucus.

Prop.—Odour strong, fœtid; taste bitterish, subacid, warm; consists of slender brownish fibres, matted together, and attached to one head; virtues extracted by water, alcohol, pure alkalis.

Oper.—Antispasmodic, tonic, emmenagogue.

Use.—Hysteria, epilepsy, hemicrania, chlorosis.

Dose.—Of the powder gr.x. to gr.xxx., three or four times a day, increasing it as far as the stomach can bear it.

Incomp.—Salts of iron.

Off. Prep.—*Infusum Valerianæ.* *Tinctura Valerianæ.* *Tinctura Valerianæ Ammoniata.*

VALERIĀNAS SODII. Vide *Sodii Valerianas.*

VALERIĀNAS ZINCI. Vide *Zinci Valerianas.*

VAPOR ACĪDI HYDROCYANICI. Inhalation of Hydrocyanic Acid. (*Acidi Hydrocyanici Dil.* min.x. ad min.xv.; *Aquæ (frigidae)* fl.dr.j. Mix in a suitable apparatus, and let the vapour that arises be inhaled.)

Oper.—Sedative.

Use.—In irritable states of the laryngeal mucous membrane.

VAPOR CHLORI. Inhalation of Chlorine. (*Calcis Chlorinatæ* unc.ij.; *Aquæ frigidae* q.s. Put the powder into a suitable apparatus, moisten it with water, and let the vapour that arises be inhaled.)

Oper.—Stimulant, antiseptic.

Use.—In foetid ulceration about the glottis, in bronchitis with foetid expectoration.

VAPOR CONINÆ. Inhalation of Conine. (*Succ. Conii* fl.unc.ss.; *Liquoris Potassæ* fl.dr.j.; *Aq. Destill.* fl.unc.j. Mix. Put 20 minims on a sponge, in a suitable apparatus, so that the vapour of hot water passing over it may be inhaled.)

Oper.—Sedative.

Use.—To allay cough, &c.

VAPOR CREASŌTI. Inhalation of Creasote. (*Creasoti* min.xij.; *Aquæ ferventis* fl.unc.viij. Mix the creasote and water in an apparatus so arranged that air may be made to pass through the solution, and may afterwards be inhaled.)

Oper.—Astringent, sedative.

Use.—To allay hysterical cough, dyspnœa, sickness arising from pregnancy, hysteria, or other diseases of the nervous system.

VAPOR IŌDI. Inhalation of Iodine. (*Tincturæ Iodi* fl.dr.j.; *Aquæ* fl.unc.j. Mix in a suitable apparatus, and having applied a gentle heat, let the vapour that arises be inhaled.)

Oper.—Stimulant, alterative.

Use.—In chronic phthisis, or bronchitis with excessive secretion.

VAPOR OLEI PINI SYLVESTRIS. Inhalation of Fir-wool Oil. (*Olei Pini Sylvestris* min.xl.; *Magnesii Carb. Leviss* gr.xx.; *Aquæ* q.s. Rub the oil with carbonate of magnesium, and add sufficient water to produce one fluid ounce. Inhale the vapour of fl.dr.j. placed over a pint of water at 122° F. (50° C.))

Oper.—Astringent, stimulant.

Use.—In laryngitis, bronchitis, phthisis.

VERĀTRI VĪRĪDIS RHIZŌMA. Green Hellebore Rhizome. *Syn.* Veratri Viridis Radix. (*Veratrum Viride.* N.O. *Melanthaceæ.* United States and Canada. l)

Comp.—Veratrine; fecula; wax.

Prop.—Inodorous, but irritating; taste bitterish, acrid, nauseous. Entire, or sliced, with or without rootlets. When entire it frequently bears at its upper end concentrically arranged remains of leaves.

Oper.—Violently emetic; purgative, even when applied externally to an issue; errhine; externally stimulant.

Use.—It is never given internally, unless in maniacal cases, in which it is not more useful than other strong purges; and even its use to promote a discharge from the nose in apoplexy and lethargy requires great caution. For its external use, see *Unguentum Veratrinæ.*

Dos.—As an errhine, gr.ij. or gr.iv. snuffed at bed-time.

Off. Prep.—*Tinctura Veratri Viridis.*

VERATRINA. Veratrine. (An alkaloid, or mixture of alkaloids, obtained from *Cevadilla*; not quite pure.)

Prop.—A pale grey, amorphous, bitter and acrid, inodorous powder, having an alkaline reaction; very slightly soluble in water, more so in ether, in rectified spirit, and in dilute acids; irritates the nose.

Oper.—A powerful topical excitant.

Use.—Externally applied as an ointment in neuralgia, and in gouty and rheumatic paralysis.

Tests.—Warmed with hydrochloric acid, it dissolves with production of a blood-red colour. With sulphuric acid it gives a deep red solution, with green fluorescence by reflected light.

Off. Prep.—*Unguentum Veratrince*.

VINUM ALOËS. Wine of Aloes. (*Aloes Socotrinæ* unc.jss.; *Cardamomi Semin. contusorum, Zingiberis*, āā gr.lxxx.; *Vini Xerici* Oij. Macerate seven days and strain.)

Oper.—Purgative, stomachic, according to the dose.

Use.—In dyspepsia and chlorosis.

Dose.—Fl.dr.j. to fl.dr.ij. as a stomachic.

VINUM ANTIMONIĀLE. Antimonial Wine. (*Antimonii Tartarati* gr.xl.; *Vini Xerici* Oj. Dissolve.)

Oper.—Emetic in large doses; diaphoretic.

Use.—To produce vomiting in children; in febrile and inflammatory diseases after purging, as a diaphoretic; contra-indicated in low fevers.

Dose.—Fl.dr.iiij. to fl.unc.j. or a teaspoonful every five minutes produce full vomiting; min.v. to fl.dr.j. every two or three hours, in any proper vehicle, excite diaphoresis.

Incomp.—Preparations of cinchona, and bitter astringent vegetables, &c. Vide *Antimonium Tartaratum*.

VINUM AURANTI. Orange Wine. (Made in Britain by the fermentation of a saccharine solution to which the fresh peel of the bitter orange has been added.)

Prop.—Golden sherry colour, aroma and taste of the bitter orange peel. It contains 10 to 12 per cent. of alcohol, and is slightly acid.

Oper.—Stimulant and stomachic.

Use.—A good vehicle for cod-liver oil.

Off. Prep.—*Vinum Ferri Citratis*. *Vinum Quinine*.

VINUM COLCHICI. Wine of Colchicum. (*R Colchici Cormi exsiccati* unc.iv.; *Vini Xerici* Oj. Macerate for seven days, and strain.)

Oper.—Diuretic, sedative, purgative.

Use.—In gout, rheumatism, and all inflammatory affections.

Dose.—From min.x. to min.xxx. in any mild fluid.

VINUM FERRI. Wine of Iron. (*Ferri in fila* (No. 35) *tracti* unc.j.; *Vini Xerici* Oj. Macerate for thirty days, and then filter.) Fl.dr.j. contains about gr.iiij. of oxide of iron.

Oper.—Hæmatic, tonic.

Use.—In anæmia and especially in children.

Dose.—Fl.dr.j. to fl.dr.iv.

VINUM FERRI CITRATIS. Wine of Citrate of Iron. (*Ferri et Ammonii Citratis* gr.clx.; *Vini Aurantii* Oj. Dissolve, and after three days filter.)

Oper.—Tonic, chalybeate.

Use.—In anæmia and debility ; well adapted for children.

Dose.—Fl.dr.j. to fl.dr.iv.

VINUM IPECACUANHÆ. Wine of Ipecacuanha. (*Ipecacuanhæ contusæ* unc.j. ; *Acidi Acetici* fl.unc.j. ; *Aq. Destill.* q.s. ; *Vini Xerici* Oj. Macerate the ipecacuanha in the acetic acid for twenty-four hours, percolate with distilled water to produce one pint. Evaporate to dryness over a water-bath. Powder the residue, macerate it in the sherry for forty-eight hours, and filter.)

Oper.—Emetic, expectorant, diaphoretic.

Use.—A good emetic for infants, as it operates more mildly than the antimonial wine ; in coughs, diarrhœa, dysentery, and hæmorrhages.

Dose.—For the former intention fl.dr.iiij. to fl.dr.vj. in divided doses ; for the latter min.v. to min.xl. in some proper vehicle every two or three hours.

VINUM OPII. Wine of Opium. (*Extr. Opii* unc.j. ; *Cinnamomi Cort.*, *Caryophyllorum*, āā gr.lxxv. ; *Vini Xerici* Oj. Macerate, strain, express, and filter.) 1 fl.oz. contains 22 grains of extract of opium. Each fluid drachm contains about half a grain of morphine.

Oper.—Narcotic, anodyne, stimulant.

Use.—In the same cases in which tincture of opium is used ; but it occasions less disturbance of the brain and nervous system, and is therefore better suited for very young patients, nervous habits, and where the head is much affected.

Dose.—Min.x. to min.xl.

VINUM QUININÆ. Wine of Quinine. (*Quininæ Sulphatis* gr.xx. ; *Acidi Citrici* gr.xxx. ; *Vini Aurantii* Oj. Dissolve first the citric acid, and then the quinine ; let the solution stand for three days, and filter.) Each fl.oz. contains 1 grain of sulphate of quinine.

Oper.—Tonic and antiperiodic.

Use.—In debility, neuralgia.

Dose.—Fl.unc.ss to fl.unc.j.

VINUM RHÆI. Wine of Rhubarb. (*Rhei Radicis contritæ* unc.jss. ; *Canellæ Albæ Corticis contriti* gr.lx. ; *Vini Xerici* Oj. Macerate for seven days, strain, and filter.)

Oper.—Laxative, stomachic, stimulant.

Use.—In weakness of stomach and bowels, and in diarrhœa.

Dose.—Fl.dr.j. to fl.dr.ij.

VINUM XERICUM. Sherry. A Spanish wine.

Comp.—All wines contain nearly the same components ; and one wine differs from another only in the relative quantities. These are alcohol ; water ; extractive matter, which precipitates with the tartar in old wines ; acid tartrate of potassium ; malic and tartaric acids ; a volatile oil, on which the flavour depends, and colouring matter, derived from the husk. Sherry contains 17 or 18 per cent. of alcohol.

Use.—Sherry is introduced into the pharmacopœia solely for the official preparations obtained by it.

Off. Prep.—*Vinum Aloes.* *Vinum Antimoniale.* *Vinum Colchici.* *Vinum Ferri.* *Vinum Ipecacuanhæ.* *Vinum Opii.* *Vinum Rhei.*

ZINCI ACĒTAS. Acetate of Zinc. (*Zinci Carb.* unc.ij. ; *Acidi Acet.* unc.v. vel q.s. ; *Aq. Destill.* fl.unc.vj. Prepared by dissolving the carbonate of zinc in acetic acid, and evaporation and crystallisation.)

Comp.— $\text{Zn}(\text{C}_2\text{H}_3\text{O}_2)_2 \cdot 2\text{H}_2\text{O}$.

Prop.—Thin translucent, colourless crystalline plates of pearly lustre, and sharp unpleasant taste; soluble in water, not affecting turmeric paper, giving a white precipitate with sulphuretted hydrogen; and evolving acetic acid when decomposed by sulphuric acid. A dilute aqueous solution is not affected by chloride of barium or nitrate of silver.

Oper.—Local astringent.

Use.—Externally in eczema, lupus, impetigo, after the acute stage; also in ophthalmic cases. Seldom used internally.

Dose.—For lotion or injection gr.ij. to gr.x. in fl.unc.j.; for an ointment gr.iv. to gr.x. in fl.unc.j. Internally: gr.j. to gr.ij. as a tonic; gr.x. to gr.xx. as an emetic.

ZINCI CARBONAS. Carbonate of Zinc. (*Zinci Sulphat.* unc.x.; *Sodii Carbonat.* unc.xss.; *Aq. Destill. ferr.* q.s. Prepared by washing and drying the precipitate obtained by adding carbonate of sodium to a solution of sulphate of zinc.)

Comp.— $\text{ZnCO}_3(\text{Zn}2\text{HO})_2 \cdot \text{H}_2\text{O}$.

Prop.—White, tasteless, inodorous, insoluble in water, soluble with effervescence and without residue in dilute nitric acid. With carbonate of ammonium gives a white precipitate, soluble in excess of reagent; from the resulting solution sulphhydrate of ammonium throws down a white precipitate. It is not affected by chloride of barium or nitrate of silver.

Oper.—Absorbent, tonic.

Use.—In powder for the cure of eczema, intertrigo, excoriations, and superficial ulcerations; also in form of ointment for similar conditions.

Off. Prep.—*Zinci Acetas.* *Zinci Chloridum.* *Zinci Oxidum.* *Zinci Sulphas.*

ZINCI CHLORIDUM. Chloride of Zinc. (*Zinci Granul.* lb.j.; *Acidi Hydrochlor.* fl.unc.xliv.; *Liq. Chlori* q.s.; *Zinci Carb.* unc.ss. vel q.s.; *Aq. Dest.* Oj. Prepared by the action of hydrochloric acid on granulated zinc; after heating and filtering, pour in the solution of chlorine, and afterwards add the carbonate of zinc. Separate the sediment, evaporate, and pour into moulds.)

Comp.— ZnCl_2 .

Prop.—Colourless, deliquescent, soluble in water, alcohol, or ether; the aqueous solution gives a white precipitate with sulphhydrate of ammonium or nitrate of silver. The solution is not tinged blue by ferrocyanide or ferricyanide of potassium; the white precipitate with ammonia or potash is redissolved by the addition of either in excess.

Oper.—Escharotic.

Use.—In carcinomatous ulceration; in naevi; to destroy the nerve in carious teeth; to form issues.

Off. Prep.—*Liquor Zinci Chloridi.*

ZINCI CHLORIDI LIQUOR. See *Liquor Zinci Chloridi.*

ZINCI OXIDUM. Oxide of Zinc. (Prepared by the reduction of the carbonate to the state of oxide with the aid of heat.)

Comp.— ZnO .

Prop.—In powder; nearly white, becoming pale yellow when heated; inodorous; tasteless; insoluble in alcohol or water. Dissolves without effervescence in diluted nitric acid, giving a solution from which chloride of barium, nitrate of silver, or dilute sulphuric acid,

throws down no precipitate. It gives with carbonate of ammonium a white precipitate, soluble in an excess of reagent, forming a solution precipitated white by sulphhydrate of ammonium.

Oper.—Tonic, antispasmodic, externally detergent, exsiccative.

Use.—In epilepsy, chorea, and other spasmodic affections, and to check colliquative sweats; for its external use, see *Ung. Zinci*.

Dose.—Gr.ij. to gr.x.

Off. Prep.—*Unguentum Zinci*.

ZINCI SULPHAS. Sulphate of Zinc. (*Zinci Granul.* unc.xvj.; *Acidi Sulphurici* fl.unc.xij.; *Aq. Destill.* Oiv.; *Liq. Chlori* q.s.; *Zinci Carb.* unc.ss. vel q.s. Prepared by the action of sulphuric acid on granulated zinc; after heating and filtering, test for iron, and if any be present add the solution of chlorine and afterwards the carbonate of zinc; separate the precipitate, evaporate and crystallise.)

Comp.— $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$.

Prop.—Inodorous; taste styptic; in white, semi-transparent, efflorescent crystals, which are right rhombic prisms. Its solution in water gives a white precipitate with chloride of barium or sulphhydrate of ammonium; it is not tinged purple by tincture of galls, and, when acidulated with sulphuric or hydrochloric acid, gives no precipitate with sulphuretted hydrogen. After it has been boiled for a few minutes with a little nitric acid, it yields, with ammonia, a white precipitate, soluble without colour in excess of reagent.

Oper.—Emetic, nervine tonic, antispasmodic, externally astringent.

Use.—As it operates very quickly, it is used alone or combined with infusion of ipecacuanha, to empty the stomach in the commencement of the cold stage of ague, and in other cases where immediate vomiting is required. As a tonic it is useful in phthisis, dyspepsia, and nervous affections. Externally in form of lotion, in ophthalmia, after the inflammatory action has subsided; in injections, in gonorrhœa; and as a lotion in external inflammations, and to stop inordinate discharges.

Dose.—Gr.x. to gr.xxx. to produce vomiting; as a tonic gr.j. to gr.iiij. twice or thrice a day.

Incomp.—Alkalis, earths, carbonate of ammonium, hydrosulphides, solution of lime, astringent vegetable infusions, milk.

Off. Prep.—*Zinci Carbonas.* *Zinci Valerianas.*

ZINCI SULPHOCARBOLAS. Sulphocarbolate of Zinc. (By heating a mixture of carbolic acid and sulphuric acid, saturating with oxide of zinc, evaporating and crystallising.)

Comp.— $\text{Zn}(\text{C}_6\text{H}_5\text{SO}_4)_2 \cdot \text{H}_2\text{O}$.

Prop.—Tabular efflorescent crystals, soluble in rectified spirit or water.

Oper.—Antiseptic, astringent.

Use.—As an injection in gonorrhœa or leucorrhœa, a solution of from one to three grains to the ounce being employed.

ZINCI VALERIĀNAS. Valerianate of Zinc. (*Sodii Valerianatis* unc.v.; *Zinci Sulphatis* unc.vss.; *Aque Destillatæ* q.s. Dissolve the valerianate of sodium and the sulphate of zinc separately in two pints of water; and having raised both solutions to near boiling point, mix them, and skim off the crystals which are produced on cooling. Let the solution be now evaporated at a temperature not exceeding 200° F. (93°·3 C.) until it is reduced to fl.unc.iv., removing, as before, the crystals from the surface; the salt thus procured is to

be steeped for an hour in as much cold distilled water as is just sufficient to cover it, and then transferred to a paper filter, on which it is to be first drained, and then dried at ordinary temperatures.)

Comp.— $\text{Zn}(\text{C}_5\text{H}_9\text{O}_2)_2$.

Prop.—Minute white crystals, when pure; brilliant and tabular. Soluble in hot water and in alcohol, less soluble in cold water or in ether. Heated with dilute sulphuric acid, it gives a distillate, which, when mixed with solution of acetate of copper, does not immediately affect the transparency, but after a little time forms oily drops, which gradually pass into a bluish-white crystalline deposit.

Oper.—Nervine tonic, antispasmodic.

Use.—In hysteria, chorea, epilepsy, neuralgia.

Dose.—Gr. j. to gr. iij. thrice a day.

Incomp.—Acids, solub'e carbonates; most metallic salts and astringent vegetable infusions and decoctions.

ZINCUM. Zinc. (A metal obtained from calamine and blende; its ores are found in England and other parts.) Symbol Zn. Equiv. 65.

Prop.—Colour bluish white; lustre of a fresh surface considerable, but it is soon dulled by the facility of its oxidation; hard; texture striated; burns with a bright flame at a high temperature, and is volatilised in the form of a white flocculent oxide. Soluble in nitric acid; ammonia throws down a precipitate, but redissolves it when added in excess.

Use.—In pharmacy to form *Zincum Granulatum*.

ZINCUM GRANULĀTUM. Granulated Zinc. (Prepared from the zinc of commerce by pouring the fused metal in a thin stream into cold water.)

Use.—For pharmaceutical purposes only.

Off. Prep.—*Liquor Zinci Chloridi*. *Zinci Chloridum*. *Zinci Sulphas*.

ZINGĪBER. Ginger. (The scraped and dried rhizome of *Zingiber officinale*. N.O. *Zingiberaceæ*. East and West Indies. ♀)

Prop.—Odour agreeable, aromatic; taste warm, aromatic, pungent; in flattish, irregularly branched pieces, pale buff colour, striated and fibrous; yields its virtues to alcohol, and in a great degree to water.

Oper.—Carminative, stimulant, sialagogue.

Use.—In gout, flatulent colic, dyspepsia, and tympanites; as an adjunct to griping purgatives; less heating than pepper.

Dose.—Gr. x. to gr. xx.; an overdose is apt to induce spasmodic stricture.

Off. Prep.—*Confectio Opii*. *Confectio Scammonii*. *Infusum Sennæ*. *Pil. Scillæ Comp.* *Pulvis Cinnamomi Compositus*. *Pulvis Jalapæ Compositus*. *Pulvis Opii Compositus*. *Pulvis Rhei Comp.* *Pulv. Scammonii Comp.* *Syrupus Zingiberis*. *Tinct. Zingiberis*. *Tinct. Zingiberis Fortior*. *Vinum Aloes*.

APPENDIX.

No. I.

CONTAINING NOTICES OF SOME OF THE MORE IMPORTANT
NON-OFFICIAL MEDICINES AND PREPARATIONS.

ABRUS PRECATORIUS. Jequirity Seeds. (*Abrus precatorius*. N.O. *Leguminosæ*.)

Prop.—Owing to the presence of a ferment, an infusion rapidly develops bacteria.

Use.—To produce purulent ophthalmia in the treatment of granular lids. Employed as infusion (powdered seeds 3, macerated in cold water 500, then add hot water 500, and filter) or as paste.

ADONIS VERNALIS. The leaves and stalks of *Adonis vernalis*. N.O. *Ranunculaceæ*.

Comp.—A glucoside, adonidin.

Oper.—Cardiac tonic and diuretic; the action resembles that of digitalis, but it is not cumulative, and it causes vomiting and diarrhœa more readily.

Use.—In heart disease, when digitalis has failed, to lessen the frequency of contraction and regulate the rhythm. Also in cardiac and renal dropsy.

Dose.—Fl.dr. iv. of an infusion (1 in 40).

ÆTHYL BROMIDUM. Bromide of Ethyl. *Syn.* Hydrobromic Ether.

Prepared by distilling a mixture of phosphorus, alcohol, and bromine.

Prop.—Colourless, very volatile liquid, peculiar odour, taste sweetish and warm. Liable to decompose on keeping.

Oper.—Local and general anæsthetic; action and recovery rapid.

Use.—To produce anæsthesia, to relieve migraine. For local effects in dentistry.

ÆTHYL IODIDUM. Iodide of Ethyl. *Syn.* Hydriodic Ether. Prepared by distilling a mixture of phosphorus, alcohol, and iodine.

Prop.—Volatile, strong ethereal odour, not inflammable.

Oper.—Anæsthetic, expectorant, antispasmodic.

Use.—In spasmodic asthma and nervous dyspnœa; also in bronchitis and laryngitis.

Dose.—Min. v. by inhalation.

ALCOHOL METHYLICUM. Methyllic Alcohol. *Syn.* Wood Spirit.

A rectified product of the destructive distillation of wood.

Prop.—Colourless liquid. Sp. gr. about .803. Readily miscible with water, chloroform, ether, and ethylic alcohol. Solvent for fats and volatile oils.

Oper.—Narcotic, sedative.

Use.—To allay cough in phthisis. Also, when mixed with chloroform, as an anæsthetic.

AMMONII IODIDUM. Iodide of Ammonium, NH_4I .

Prop.—Whitish deliquescent salt, becoming yellow on exposure to air. Freely soluble in water and glycerine, somewhat sparingly in rectified spirit.

Oper. & Use.—Similar to iodide of potassium, but said to be more active.

Dose.—Gr.ij. to gr. v.

ANTIPYRIN. *Syn.* Dimethyl-oxychinicin. Prepared synthetically.

Comp.— $\text{C}_{11}\text{H}_{12}\text{N}_2\text{O}$.

Prop.—Prismatic colourless crystals, or whitish crystalline powder, very slight odour, taste somewhat bitter. Melts at 230°F . to 235°F . (110°C . to 113°C .) Readily soluble in water, in rectified spirit, and in chloroform.

Oper.—Antipyretic.

Use.—To reduce the temperature in typhoid, phthisis, rheumatism, &c. A rash like measles sometimes occurs during its employment.

Dose.—Gr.v. to gr.xx., repeated hourly for two or three doses. In 24 hours not more than gr.lxxv. should be administered.

Tests.—A dilute aqueous solution gives a deep red colour with perchloride of iron, changed to bright yellow by the addition of strong sulphuric acid.

BRUCINA. Brucine. An alkaloid obtained from the seed of *Strychnos Nux-vomica*. N.O. *Loganiaceæ*.

Comp.— $\text{C}_{23}\text{H}_{26}\text{N}_2\text{O}_4$.

Prop.—Crystalline; more soluble, but less bitter, than strychnine. With nitric acid gives a blood-red colour.

Oper.—Resembles strychnine, but very much more feeble. Tonic, antiperiodic.

Use.—In epilepsy.

Dose.—Gr. $\frac{1}{12}$ to gr. $\frac{1}{2}$.

CAMPHORA MONOBROMATA. Monobromated Camphor. U.S.P.

Comp.— $\text{C}_{10}\text{H}_{15}\text{BrO}$.

Prop.—In acicular crystals, with slight camphoraceous odour and terebinthinate taste. Insoluble in water, soluble in rectified spirit, ether, and chloroform.

Oper.—Hypnotic.

Use.—In delirium tremens, hysteria, and whooping cough.

Dose.—Gr. ij. to gr. v. or more, in pill.

CHAULMOOGRA OIL. *Vide* Oleum Gynocardia.

CHEKAN. The leaves and shoots of *Myrtus Chekan*. N.O. *Myrtaceæ*.

Comp.—A volatile alkaloid, *chekanine*, volatile oil, tannin, and resin.

Oper.—Tonic, diuretic, expectorant, antiseptic.

Use.—In bronchitis, laryngitis, diphtheria.

Dose.—Fl.dr.j. to fl.dr.ijj. of a fluid extract prepared with dilute alcohol.

CHINOLINUM. Chinolin. A derivative of cinchonine and quinine which may be prepared synthetically by heating nitrobenzol, aniline, and glycerine with strong sulphuric acid.

Prop.—An oily liquid with characteristic odour and taste.

Oper.—Antiseptic, antipyretic.

Use.—Applied locally in diphtheria; employed internally, in the form of the tartrate, in typhoid fever and ague. It readily excites vomiting.

Dose.—Of the tartrate, gr.v. to gr.xv.

COCCLUS INDICUS. The fruit of *Anamirta paniculata*. N.O. *Menispermaceæ*.

Comp.—A crystalline neutral principle, Picrotoxin ($C_5H_6O_2$), and two alkaloids, Menispermine and Paramenispermine.

Oper. & Use.—*Vide* Picrotoxin.

CONVALLARIA. Lily of the Valley. The entire plant of *Convallaria majalis*.

Comp.—Two glucosides, Convallarin and Convallamarin.

Oper.—Cardiac tonic and diuretic, similar to digitalis, but with no cumulative action.

Use.—In the various forms of heart disease, and in cardiac dropsy. As an alternative when digitalis fails.

Prep.—*Extractum Convallariæ*.

CURARA. Curare. *Syn.* Woorara, Wourali. A dried extract from species of *Strychnos*, *Cocculus*, and other plants.

Comp.—Extremely variable.

Oper.—Causes paralysis of voluntary muscles, by action on the peripheral terminations of the nerves, not on their central origin.

Use.—In chorea, hydrophobia, and tetanus, as a palliative.

Dose. Gr. $\frac{1}{10}$ to gr. $\frac{1}{2}$, by subcutaneous injection. When given by the mouth it is eliminated too rapidly to have any effect.

DIMETHYL-OXYCHINICIN. *Vide* Antipyrin.

ETHIDENI DICHLORIDUM. Dichloride of Ethidene.

Prop.—Colourless volatile liquid, resembling chloroform in odour and taste; miscible with ether, alcohol, and chloroform.

Oper.—Anæsthetic; more pleasant and less dangerous than chloroform, recovery from it more rapid.

Use.—By inhalation in minor operations, especially for children.

EUONYMIN. Euonymin. The bitter principle of *Euonymus*, precipitated, with resin and a fixed oil, when a strong tincture is poured into water.

Prop.—An amorphous resinous powder of brown or greenish colour.

Oper. & Use.—*Vide* Euonymus.

Dose.—Gr.ss. to gr.v., followed by a saline aperient.

EUONYMUS. Euonymus. U.S.P. The bark of *Euonymus atropurpureus*.

Comp.—A bitter principle, *euonymin*, with resin, and a fixed oil.

Oper.—Hepatic stimulant, cathartic, diuretic.

Use.—In constipation associated with deficient excretion of bile. Employed in the form of euonymin, or as an extract of euonymus.

EXTRACTUM CONVALLARIÆ. An aqueous extract of *Convallaria*.

Oper. & Use.—*Vide* Convallaria.

Dose.—Gr.ij. to gr.viij.

EXTRACTUM EUONYMI. Extract of *Euonymus*. U.S.P. An alcoholic extract evaporated to pitular consistence with subsequent addition of 5 per cent. of glycerine.

Oper. & Use.—*Vide* *Euonymus*.

Dose.—Gr.ij. to gr.v. in pill, to be followed by a saline aperient.

EXTRACTUM HYDRASTIS FLUIDUM. Fluid Extract of *Hydrastis*. U.S.P. Fl.unc.j. equals unc.j. of *Hydrastis*.

Oper.—Bitter tonic.

Us.—In atonic dyspepsia and general debility. Also in uterine hæmorrhage.

Dose.—Min.xx. to fl.dr.j.

GRINDELIA. *Grindelia*. U.S.P. Leaves and flowering tops of *Grindelia robusta*. N.O. *Compositæ*.

Comp.—The active ingredients probably are a resin and a volatile oil.

Oper.—Antispasmodic, expectorant diuretic.

Use.—In spasmodic asthma, asthmatic attacks in bronchitis, whooping cough. Also in cystitis and gonorrhœa.

Dose.—Of fluid extract, min.x. to min.xxx.; of solid extract, gr.j. to gr.iiij.

GUARANA. *Guarana*. U.S.P. A dried paste from the powdered seeds of *Paullinia sorbilis*. N.O. *Sapindaceæ*.

Prop.—Dark reddish-brown cylindrical rolls, showing fragments of seeds. Taste bitter, astringent; odour somewhat like chocolate.

Comp.—Guaranine or caffeine, 5 per cent.; tannic acid, starch, gum.

Oper.—Cardiac tonic, diuretic, astringent.

Use.—In migraine; also in diarrhœa and dysentery.

Dose.—Gr.x. to gr.lx., in powder or infusion.

HAMAMELIS. *Hamamelis*. U.S.P. The leaves of the Witch-hazel (*Hamamelis virginica*. N.O. *Hamamelidaceæ*).

Comp.—Tannic acid, odorous matters, and a bitter principle.

Oper.—Powerfully astringent, both local and remote.

Use.—To arrest hæmorrhage from piles. Also in hæmoptysis, in dysmenorrhœa, and in menorrhagia. Employed in the form of a fluid extract, a tincture (obtained from the bark), or as 'Pond's extract' or 'Hazeline.'

Dose.—Of the fluid extract, min.xv. to fl.dr.ij.; of the tincture, min.ij. to min.v. or more.

HOMATROPINA. *Homatropine*. An artificial alkaloid, prepared by treating salts of tropeine with dilute hydrochloric acid.

Oper.—Mydriatic.

Use.—Solution of hydrobromate of homatropine (gr.iv. to fl.unc.j.) is employed to dilate the pupil and paralyse muscles of accommodation; its effects disappear more rapidly than those of atropine.

HYDRASTIN. *Hydrastin*. A resinous extract from the root of *Hydrastis canadensis*.

Comp.—Hydrastine, berberine, and resin.

Oper.—Hepatic stimulant, feeble intestinal stimulant.

Use.—In constipation and headache associated with deficient secretion of bile.

Dose.—Gr.ij. to gr.vj. in pill.

HYDRASTIS. *Golden Seal*. U.S.P. Rhizome and rootlets of *Hydrastis canadensis*. N.O. *Ranunculaceæ*.

Comp.—A yellow alkaloid, berberine, and a colourless alkaloid, hydrastine.

Oper.—Bitter tonic, hepatic stimulant.

Use.—As a simple vegetable bitter tonic. Employed in the form of a tincture. In chronic constipation, also in uterine hæmorrhage.

Dose.—Of the tincture min.xxx. to min.lx.

HYDROCHINON. Hydrochinon. *Syn.* Hydroquinon. A derivative of coal tar.

Comp.— $C_6H_6O_2$, isomeric with pyrocatechin and resorcin.

Prop.—Colourless crystals, inodorous, taste sweetish; slightly soluble in water, readily in alcohol and ether.

Oper.—Antiseptic, antipyretic.

Use.—As febrifuge in typhoid fever; it acts like quinine, but does not produce buzzing in the ears, headache, &c.

Dose.—Gr.xv.

JEQUIRITY. *Vide* Abrus Precatorius.

KAIRIN. Kairin. *Syn.* Oxychinoline-ethyl hydride. Synthetically prepared.

Comp.— $C_{11}H_{15}NO$.

Prop.—Minute granular crystals, freely soluble. Taste saline, bitter, persistent, and extremely nauseous.

Oper.—Antipyretic.

Use.—For its antipyretic action, but little employed on account of its unpleasant after-effects.

Dose.—Gr.v. to gr.viij. in pill.

KAOLIN. Kaolin. Native white Silicate of Alumina purified by elutriation.

Prop.—Pearly white powder, chemically inert.

Use.—As a soft drying absorbent powder, for infants, and for cases of eczema, prurigo, intertrigo, &c.

KOLA. Kola. The fruit of *Sterculia acuminata*. N.O. *Sterculiaceæ*.

Comp.—Caffeine 2 per cent., theobromine and tannin .02 per cent.

Oper.—Cardiac tonic, diuretic, general tonic.

Use.—In heart disease to regulate the pulse and diminish cardiac dropsy. To improve appetite and digestion.

Dose.—May be employed as an infusion (a cupful), as a tincture, fl.dr.j. (1 part of Kola to 5 of spirit), or as alcoholic extract, gr.ij.

LITHII BENZOAS. Benzoate of Lithium. U.S.P.

Comp.— $LC_7H_5O_2$.

Prop.—White powder, or small shining scales, inodorous, or with faint benzoin-like odour, taste sweetish, cooling. Soluble in water.

Oper.—Antilithic.

Use.—For gout and uric acid diathesis.

Dose.—Gr.xv. to gr.xxx.

LITHII GUAIACAS. Guaiacate of Lithium.

Comp.—Lithia 1, guaiacum resin 3.

Oper.—Antilithic, antirheumatic.

Use.—In chronic gout, and in rheumatoid arthritis.

Dose.—Gr.v.

LITHII SALICYLAS. Salicylate of Lithium. U.S.P.

Comp.— $2LC_7H_5O_3, H_2O$.

Prop.—A deliquescent white powder, odourless, taste sweetish, reaction acid. Very soluble in water and in alcohol.

Oper.—Antilithic, antirheumatic. Less irritant than salicylic acid.

Use.—In gout and rheumatism, to combine the effects of salicylic acid and lithium.

Dose.—Gr.xx. to gr.xl.

NAPHTHALIN. Naphthalin. Formed in the manufacture of coal gas.
Comp.— $C_{10}H_8$.

Prop.—White shining crystalline plates, when pure; tarry odour. Insoluble in water, soluble in ether, fats, fixed and volatile oils.

Oper.—Antiseptic, parasiticide.

Use.—As dusting powder for ulcers and sloughing wounds. Also for scabies. It has been recommended for intestinal and vesical catarrh.

NAPHTHOL. Beta-Naphthol. *Syn.* Naphthyl Alcohol. A coal-tar derivative.

Comp.— $C_{10}H_7HO$.

Prop.—Small white crystalline scales, odourless when purified by sublimation.

Oper.—Disinfectant.

Use.—In parasitic diseases, in eczema, psoriasis, and chronic ulcers. Employed as ointment containing from 8 to 10 per cent.

OLEUM AMYGDALÆ AMARÆ. Oil of Bitter Almond. U.S.P. (A volatile oil obtained by maceration with water and subsequent distillation.)

Prop.—Thin, pale yellowish liquid, with odour of hydrocyanic acid. Sparingly soluble in water; miscible with rectified spirit and ether.

Use.—As a flavouring agent.

OLEUM GYNOCARDIÆ. Chaulmoogra Oil. Expressed from the seeds of *Gynocardia odorata*. N.O. *Biraceæ*.

Comp.—Palmitic acid, gynocardic acid, &c.

Prop.—Solid, unctuous, light brown, disagreeable taste and smell.

Oper.—Alterative, antirheumatic, local stimulant.

Use.—Internally in leprosy, scrofula, phthisis, skin diseases, and rheumatism. Externally in various skin diseases, chronic rheumatism, and gout.

Dose.—Gr.ij. to gr.xv. in emulsion, or with milk.

PARALDEHYDUM. Para'dehyde. May be obtained by treating aldehyde with dilute sulphuric or nitric acid.

Comp.— $C_6H_{12}O_3$.

Prop.—Colourless liquid, with peculiar odour and pungent taste; sparingly soluble in water, freely in alcohol and ether.

Oper.—Hypnotic.

Use.—To produce quiet refreshing sleep; of special service when chloral would be dangerous in heart disease.

Dose.—Fl.dr.ss. to fl.dr.j. The pungent taste may be diminished by tincture of orange and syrup.

PICROTOXIN. Picrotoxin. A neutral principle from *Cocculus indicus*.
Comp.— $C_8H_6O_2$.

Prop.—Colourless acicular crystals, with bitter taste, slightly soluble in water, readily in alcohol, ether, and chloroform.

Oper.—Convulsant, intoxicant.

Use.—To check night-sweats of phthisis; also in epilepsy, pharyngeal paralysis, migraine, and other nervous affections. Externally to destroy pediculi.

Dose.—Gr. $\frac{1}{300}$ to gr. $\frac{1}{3}$ in pill.

POTASSII NITRIS. Nitrite of Potassium. KNO_2 .

Oper. & Use.—Similar to Nitrite of Sodium and Nitrite of Amyl.

PROPYLAMINE. *See* Trimethylamina.

PYRIDIN. Pyridin. $\text{C}_5\text{H}_5\text{N}$. Obtained by dry distillation of various organic substances.

Prop.—A transparent liquid, volatile, odour strong and peculiar.

Use.—In the form of vapour to relieve the dyspnoea of spasmodic asthma. A fluid drachm is poured into a plate and allowed to evaporate in a small room; the patient remains in the room an hour and a half three times a day.

QUEBRACHO CORTEX. Bark of *Aspidosperma Quebracho*. N.O. *Apocynaceæ*.

Comp.—A crystalline alkaloid, aspidospermine, a second, quebrachine, and probably others.

Oper.—Tonic, febrifuge, anti-asthmatic.

Use.—In typhoid fever; also in asthma and dyspnoea the result of heart disease, the pulse rate being notably diminished by its action.

Dose.—Of a tincture (1 in 5 of proof spirit) fl.dr.ss. to fl.dr.j.

QUINIDINÆ SULPHAS. Sulphate of Quinidine. U.S.P. Chiefly from *Cinchona pitayensis*.

Comp.— $(\text{C}_{20}\text{H}_{24}\text{N}_2\text{O}_2)_2, \text{H}_2\text{SO}_4, 2\text{H}_2\text{O}$.

Prop.—White silky crystals, inodorous, taste very bitter; sparingly soluble, except in presence of free acid.

Oper.—Antipyretic, antiperiodic.

Use.—As quinine, but more easily taken by children.

Dose.—Gr.j. and upwards.

QUININA. Quinine. U.S.P. Prepared by precipitating a solution of the sulphate with solution of ammonia or of soda.

Comp.— $\text{C}_{20}\text{H}_{24}\text{N}_2\text{O}_2, 3\text{H}_2\text{O}$.

Prop.—White or greyish-white amorphous powder; intensely bitter, sparingly soluble.

Use.—In the preparation of citrate of iron and quinine.

QUININÆ BISULPHAS. Bisulphate of Quinine. U.S.P.

Comp.— $\text{C}_{20}\text{H}_{24}\text{N}_2\text{O}_2, \text{H}_2\text{SO}_4, 7\text{H}_2\text{O}$.

Prop.—Colourless crystals or masses of crystals, odourless, bitter. Readily soluble.

Oper. & Use.—Like that of the sulphate. A solution of 1 or 2 gr. to the ounce has been applied to the eye and nostrils for hay fever.

Dose.—Gr.j. to gr.v. and upwards.

QUININÆ HYDROBROMAS. Hydrobromate of Quinine. U.S.P.

Prop.—Large yellowish prisms or masses of crystals; inodorous, taste very bitter; freely soluble.

Oper.—As quinine, but producing fewer unpleasant head symptoms.

Use.—On account of its solubility, for hypodermic injections.

Dose.—Gr.ss. to gr.ij. hypodermically.

QUININÆ SALICYLAS. Salicylate of Quinine.

Prop.—White silky acicular crystals, sparingly soluble.

Oper.—Combines the action of quinine and salicylic acid.

Use.—In chronic rheumatism, rheumatic gout, and rheumatic neuralgia.

Dose.—Gr.iiij. to gr.iv. in the form of pills.

QUININÆ VALERIANAS. Valerianate of Quinine. U.S.P. Prepared by decomposing hydrochlorate of quinine with valerianate of sodium.

Comp.— $C_{20}H_{24}N_2O_2 \cdot C_5H_{10}O_2 \cdot H_2O$.

Prop.—White shining crystals, or an amorphous white powder with slight odour of valerianic acid; very sparingly soluble.

Oper.—Nervine tonic and antispasmodic.

Use.—In neuralgia, hysteria, and spasmodic nervous affections.

Dose.—Gr.j. to gr.iiij. in pill.

RESORCIN. Resorcin. A derivative of benzol or phenol.

Prop.—Crystalline plates resembling benzoic acid. Soluble, readily volatilised.

Oper.—Antiseptic, antipyretic.

Use.—As local application in diphtheria, in parasitic skin diseases, in gonorrhœa, and vesical catarrh. As a spray in whooping cough.

Full doses internally may cause faintness and delirium.

Dose.—Gr.v. to gr.xv. or more.

SODII NITRIS. Nitrite of Sodium. $NaNO_2$.

Prop.—Colourless, deliquescent, granular crystalline powder, freely soluble in water, sparingly in rectified spirit.

Oper.—Similar to nitrite of amyl, but slower in its action.

Use.—In angina pectoris and in epilepsy.

Dose.—Gr.ss. to gr.ij. or more, increased with caution.

STROPHANTHIN. Strophanthin. An active principle from the seeds of *Strophanthus hispidus*.

Oper.—Diuretic and cardiac tonic; allied to digitalis in its physiological action.

Use.—Employed by Prof. Fraser in heart disease associated with dropsy.

Dose.—From gr. $\frac{1}{120}$ to gr. $\frac{1}{60}$ hypodermically.

SYRUPUS CALCIS LACTOPHOSPHATIS. Syrup of Lactophosphate of Lime. U.S.P. (*Calcii Phosph. Precip.* xxij.; *Acid. Lact.* xxxij.; *Aq. Aurantii Flor.* lxxx.; *Sacch.* 600; *Aq. Dest.* ad 1000.) Contains about 2 per cent. of phosphate of lime.

THALLIN. Thallin. *Syn.* Tetrahydro-parachinanisol. Synthetically prepared.

Comp.— $C_{10}H_{13}NO$.

Prop.—Whitish granular crystals with nauseous taste, forming soluble sulphates and tartrates which give an emerald-green colour with perchloride of iron.

Oper.—Antipyretic, stated to be more efficacious than antipyrin and kairin.

Use.—In the pyrexia of typhoid, phthisis, &c.

Dose.—Gr.iiij. to gr.v.

TINCTURA HYDRASTIS. Tincture of Hydrastis. (*Hydrastis* unc.ij.; *Spiritus Ten.* fl.unc.x. Prepared by maceration and percolation.)

Oper.—Bitter tonic.

Use.—In gastric catarrh from chronic alcoholism, in atonic dyspepsia, and in chronic constipation.

Dose.—Fl.dr.ss. to fl.dr.j. or more.

TRIMETHYLAMINA. Trimethylamine. *Syn.* Propylamine. Secaliu. Prepared by distilling herring-brine or decomposing fish with lime. Also from ergot, arnica, and other vegetable sources.

Comp.— $(\text{CH}_3)_3\text{N}$.

Oper.—Anodyne; sedative.

Use.—Externally applied for chronic rheumatic pains. Internally in acute rheumatism.

Dose.—Of the hydrochlorate gr.ij. to gr.ijj., with peppermint water or tincture of orange-peel to disguise the unpleasant taste and odour.

URETHANE. Urethane. *Syn.* Ethyl Carbamate. The ethyl ether of carbaminic acid.

Comp.— $\text{C}_3\text{H}_7\text{NO}_2$.

Prop.—White crystals, inodorous; freely soluble in water, in alcohol, and in ether.

Oper.—Hypnotic, sedative.

Use.—To produce sleep. No disagreeable after-effects are said to result.

Dose.—Gr.viii. repeated in two hours, if necessary.

ZINCI BROMIDUM. Bromide of Zinc. U.S.P.

Comp.— ZnBr_2 .

Prop.—Whitish granular powder, very deliquescent; odourless, taste sharp saline, metallic. Very soluble in water and in alcohol.

Oper.—Nervine tonic, in large doses emetic.

Use.—In epilepsy to produce combined effects of zinc and bromine.

Dose.—Gr.ij. to gr.x. freely diluted, or with syrup.

APPENDIX.

No. II.

ON POISONS.

POISONS are substances of an animal, a vegetable, or a mineral nature, which produce effects deleterious to the animal economy when they are taken into the stomach in certain doses; and, in some instances, even when they are applied to the surface of the body or inhaled. Many poisonous substances, however, are daily employed as medicines; and with the best results, when they are administered in proper doses, and with due precaution.

Some writers who professedly treat of poisons have arranged the substances which they regard as such, according to their effects on the animal economy; but as the following memoranda are intended merely as references from which the practitioner may refresh his memory when his assistance is suddenly required in cases of poisoning, the author conceives the alphabetical arrangement will be the most useful, and he has consequently adopted it. A similar reason has also induced him to place the English name as the title of each article.*

ACETIC ACID. (*Strong.*)

Symptoms.—Great heat, and a sensation of burning pain in the stomach; convulsions; death.

Morbid Appearances.—The mouth and fauces brownish,—excoriated, and the lingual papillæ enlarged. The œsophagus also lined with a brown adventitious membrane. The stomach of a livid hue towards the pylorus and black at the fundus. The vessels large and much injected.

Antidotes.—Magnesia, lime water, whitewash; soap in water; after which the stomach should be emptied by an emetic. Milk or oil should be given subsequently.

ACETATE OF LEAD. See under *Carbonate of Lead*.

ACONITUM. See *Monkshood*.

AGARIC. See *Fungi*.

AMMONIA. (*Liquor Ammoniacæ.*) A corrosive mineral poison.

Symptoms.—Excoriations of the mouth and fauces; sensation of burning in the throat, chest, and stomach; followed by vomiting and purging, the ejected matter being mixed with blood. When the dose is large, the immediate feeling is that of strangulation, attended with convulsions and high delirium. If the result be fatal, it very quickly follows the administration of the poison. The inhalation of

* Many poisonous substances are purposely not noticed, because they are not likely to be employed as such; and, consequently, they do not demand general attention.

ammonia by applying the solution to the nostrils is equally hazardous, and causes the same symptoms as when it is taken into the stomach.

Morbid Appearances.—Marks of strong inflammatory action in the œsophagus and cardiac portion of the stomach; and in the bronchial tubes when the poison has been inhaled.

Tests.—The aqueous solution of ammonia is readily recognised by its pungent odour; by changing the vegetable reds to green; by changing the infusion or tincture of turmeric to reddish-brown; by not altering the transparency of a solution of nitrate of silver; and by a blue colour being produced on the addition of a dilute solution of any of the salts of copper; or by white fumes with a rod moistened with hydrochloric acid.

Treatment.—The immediate exhibition of vinegar, lemon juice, or solution of citric acid; and afterwards of milk, mucilages, and demulcent fluids. Tracheotomy may be necessary.

* * * These instructions apply equally to cases of poisoning by *Carbonate of Ammonium* and by *Hartshorn*.

AMMONIATED COPPER. (*Cuprum Ammoniatum*.) A corrosive metallic poison.

Symptoms and Morbid Appearances nearly the same as those produced by the other salts of copper. (See *Verdigris*.)

Tests.—This poison is readily known by its beautiful blue colour and ammoniacal odour. When mixed in fluids which partially decompose it, as, for instance, coffee, port wine, or malt liquors, it may be detected by adding to the suspected fluid a few drops of an alcoholic solution of guaiacum. If the vehicle be coffee, and a salt of copper be present, it will instantly produce a beautiful deep greenish-blue precipitate. If the vehicle be port wine, it gives a green colour to the wine, and the colour evolved by the tincture of guaiacum will be nearly an indigo blue, with a slight shade of green; and if beer that of verditer. It changes solution of arsenious acid to green.

Treatment.—The use of the stomach-pump and oily clysters. Albumen in solution (in coffee, if it can be obtained) should then be freely exhibited, and vomiting again excited by drinking large quantities of mucilaginous fluids, if the poison has been very recently taken; but if it has already passed into the bowels, give castor oil in coffee; combined with opiates and other narcotics; and employ warm baths and fomentations with emollient clysters.

ANTIMONIUM TARTARATUM. See *Tartar Emetic*.

ARGENTI NITRAS See *Nitrate of Silver*.

ARSENIC—ARSENIOUS ACID. A corrosive mineral poison.

Symptoms.—Constant spitting of saliva devoid of the mercurial fœtor; constriction of the pharynx and œsophagus; nausea and vomiting, sometimes of a brown mucous matter, which is occasionally mixed with blood; fainting, with excessive thirst; a sensation of great heat at the throat and the præcordia; heat and severe pain in the stomach, which is generally so irritable as to reject the mildest fluids; severe gripings, purging, and tenesmus, the stools being deep green or black and horribly offensive; the urine scanty, red, and often bloody; the pulse small, frequent, and often intermittent, accompanied with palpitation of the heart and syncope, difficult respiration and cold sweats; swelling and itching of the whole body,

which occasionally becomes covered with livid blotches; great prostration of strength, and paralysis of the feet and hands; delirium; convulsions; strenuous priapism; and death.

Morbid Appearances.—The mouth and œsophagus are seldom inflamed; but the stomach most commonly, although not always, presents appearances of intense inflammation, but not amounting to erosion or abrasion of the villous coat; and it is on the surface of such inflamed spots that grains of the acid are generally found, when the poison has been swallowed in powder. The inflammation is evident also in the duodenum, jejunum, and ileum; but it almost disappears in the colon, although the mucous membrane of the rectum is often found not only highly inflamed, but ulcerated. The lungs are sometimes black and turgid with blood; the mitral and tricuspid valves of the heart are covered with red patches, and these extend to the fleshy columns; but the chief morbid appearances are to be looked for in the stomach and intestines. The contents of the former of these, and of portions of the latter, ought in every case to be carefully preserved, and washed in tepid *distilled* water. Cases have proved fatal in which no morbid changes have been detected.

Tests.—If any solid particles be found in the stomach, throw a few of them upon red-hot coals; they will be decomposed and exhale alliaceous vapour. Or, mix one part of them with three parts of a mixture consisting of one part of finely powdered charcoal and two parts of *very dry* carbonate of potassium; put this into a small glass tube, the upper inner surface or empty part of which is kept clean, whilst the powder is introduced, by being previously lined with paper. Having withdrawn the paper, stop the open end loosely with a little tow, or a piece of soft paper; then place the closed end for a few minutes in the flame of a spirit lamp until it becomes incandescent, when, if arsenious acid be present, a brilliant metallic crust will be found lining the upper part of the tube. This crust, placed on hot coals, will exhale dense white fumes and a strong smell of garlic.

If no solid particles be found, boil the contents of the stomach with liquor potassæ, and strain through a piece of linen rag; divide the fluid into different portions, and test each portion separately by the following reagents:—

1. Put one portion into Marsh's apparatus for the formation of arseniuretted hydrogen gas, with some diluted sulphuric acid and a piece of pure zinc, and inflame the gas evolved at the jet. If arsenious acid be present, a piece of glass held over the flame will display a spot of metallic arsenic, surrounded by a circle of black oxide of arsenic, which is surrounded by a second circle of arsenious acid; or, pass the arseniuretted hydrogen gas through a bent tube, and heat it, at a point a few inches from the jet, in the flame of a spirit lamp; a crust of metallic arsenic will line the tube on the further side of the heated point.

Or, acidulate the fluid to be tested with hydrochloric acid, and boil strips of clean metallic copper in it; if arsenious acid be present, a coating of metallic arsenic will cover the copper. (*Reinsch.*)

2. Drop into the second portion a solution of nitrate of silver to excess, in order to precipitate all the hydrochlorates it may contain; then, after the fluid has become clear, touch the surface with a glass rod dipped in liquid ammonia. If arsenious acid be present, a yellow arsenite of silver will fall from the point of the rod.
3. Drop into a third portion some ammoniated sulphate of copper: if arsenious acid be present, Scheele's green will be formed. The

accordance of these tests affords sufficient evidence. The tubes, and the glass coated with the metallic arsenic, should be taken into court, as well as comparative tubes and glasses coated by treating the simple acid and its solution. All these tubes should be previously rolled up in paper, and sealed in the presence of the persons who assist in the testing.

Treatment.—Evacuate the stomach by the stomach-pump, using lime-water instead of distilled water, or use hypodermic solution of apomorphine (min. v. of 1 in 50 solution); administer large draughts of tepid mucilaginous fluids, or sugar and water, or chalk and water, or limewater; avoid the use of alkalis, but administer charcoal and hydrated peroxide of iron or dialysed iron. Afterwards combat the inflammatory symptoms by tepid baths, emollient enemas, and narcotics. If the immediate fatal symptoms be averted, let the patient for a long time subsist wholly on farinaceous food, milk, and demulcents.

* * * All arsenical poisons operate nearly in the same manner as arsenious acid; and consequently similar means are required for detecting their presence and counteracting their influence.

ATROPA BELLADONNA. See *Deadly Nightshade*.

BELLADONNA. See *Deadly Nightshade*.

BICYANIDE OF MERCURY. (*Hydrargyri Bicyanidum*.) An acrid mineral poison.

Symptoms.—They closely resemble those of poisoning by corrosive sublimate, accompanied with severe vomiting, mercurial ulceration of the mouth, salivation, powerful action of the heart, diarrhoea, suppression of urine, semi-erection, and an ecchymosed appearance of the penis and scrotum, convulsions, and death.

Tests.—When any of the poison remains, it is recognised by its quadrangular prismatic crystals, with oblique summits, and its styptic taste. When heated in a small tube closed at one end and drawn out to a point at the other, it is decomposed, mercury sublimes, and cyanogen gas is given off, and burns with a violet flame. Its solution is decomposed by a stream of sulphuretted hydrogen gas, and sulphide of mercury and hydrocyanic acid are formed.

Treatment.—The same as in cases of poisoning by corrosive sublimate.

BLISTERING FLIES. (*Cantharis Vesicatoria*.) An acrid animal poison.

Symptoms.—Nausea; vomiting and purging, the matter ejected in either case being frequently bloody and purulent; acute pain in the epigastrium; writhing colic; great heat and irritation of the bladder and urinary organs, accompanied with the most painful priapism; the pulse is quick and hard; and, although thirst is often great, yet there is, occasionally, a horror of liquids. If these symptoms be not soon relieved, they are followed by convulsions, tetanus, delirium, syncope, and death. Throughout the attack, the breath of the patient has a very peculiar, faint, sickly odour.

Morbid Appearances.—Inflammation and erosion of the stomach; the green shining particles of the powdered flies being sometimes seen adhering to the inner coat of the viscus, or mixed with its contents. The intestines also and the kidneys exhibit marks of inflammation; and these are still more evident in the bladder, particularly when the fatal result does not immediately supervene.

Tests.—The poisonous properties of the blistering fly depend on a pecu-

liar principle, which has been named *cantharidin* ; but the poison can be recognised by the appearance of the green shining particles, which are visible in the finest powder, and by the symptoms. The alcoholic solution is precipitated white by water, but the precipitate is again dissolved by an excess of water.

Treatment.—Copious dilution with milk and demulcent fluids, the use of stomach-pump, or hypodermic injection of apomorphine (min. v. of 1 in 50) ; the warm bath, opiate frictions, and enemata of mutton broth and opium. The free use of demulcents, followed by camphor and opium, or morphine hypodermically, to allay irritation.

BROMIDE OF POTASSIUM. (*Potassii Bromidum.*) An acrid mineral poison.

Symptoms.—Nausea, vomiting, quickened respiration and pulse, great prostration of strength, death.

Morbid Appearances.—Congested state of the mucous membrane ; spots of ulcerations, softenings.

Tests.—If any of the poison remain, dissolve it and drop into the solution sulphuric acid, when the colour and odour of free bromine will be perceived. Add mucilage of starch, it will be coloured yellow. Take up the bromine with ether, and drop into the ethereal solution a solution of nitrate of silver : a whitish-yellow bromide of silver, insoluble in nitric acid and in ammonia, will fall.

Bromide of potassium does not alter the colour of tea, or coffee, or milk, or wine. To detect it in these fluids, evaporate to dryness, decompose the vegetable matter by heat, and act on the residue in the same manner as on the pure bromide.

Treatment.—Empty the stomach with the stomach-pump and tepid water. Treat the nervous symptoms by stimulants.

BRUCINE. (*Brucina.*)

Symptoms.—The same as those caused by strychnine.

Tests.—Brucine has a bitter taste. It is scarcely soluble in water at 60°, and it requires 500 parts of boiling water for its solution. It is dissolved and coloured blood-red by nitric acid ; and on the addition of a solution of protochloride of tin, the red is changed to a beautiful deep violet.

Treatment.—The same as for poisoning by strychnine.

BRYONY ROOT. (*Bryonia Dioica Radix.*) An acrid vegetable poison.

Symptoms.—Violent vomitings, with severe colic pains and purging, great thirst ; difficulty of breathing ; and sometimes convulsions.

Morbid Appearances.—Evidences of inflammation of the mucous membrane of the stomach and rectum, and congestion of blood in the lungs.

Test. This poison can only be recognised when the root itself, or a portion of it, can be obtained. It is large, fleshy, fusiform, marked externally with circles of a yellowish-white colour, and has a sweetish, yet acrid and bitter, disagreeable taste.

Treatment.—Excite vomiting by copious draughts of tepid demulcent fluids, and by irritation of the fauces ; then administer milk and mucilaginous diluents, with opiates and emollient enemata.

CAMPHOR. (*Camphora.*) A narcotic vegetable poison.

Symptoms.—Violent excitement of the brain and nervous system ; vomiting ; vertigo, preceded by pallid countenance ; great anxiety ; small pulse ; difficult respiration, syncope cold sweats, and convulsions. In some instances it has occasioned death.

Morbid Appearances.—Too few opportunities have occurred for ascertaining these with any degree of accuracy.

Test.—Camphor is always readily discovered by its peculiar odour.

Treatment.—Stomach-pump, or hypodermic injection of apomorphine (min. ν . of 1 in 50 solution). Wine and opium, exhibited at short intervals until the symptoms abate. Hot bottles and blankets to the extremities.

CANTHARIDES. See *Blistering Flies*.

CARBONATE OF BARYTA. (*Carbonas Barytæ*). See *Muriate or Hydrochlorate of Baryta*.

CARBONATE OF LEAD. (*Plumbi Carbonas*.) A sedative metallic poison. (All the salts of lead are resolvable into the carbonate, which is the only direct poison of lead.)*

Symptoms.—Obstinate constipation; violent colic, with retraction of the abdomen; vomiting; the pulse small and hard; laborious breathing and tremors, terminating in paralysis of the extremities, and occasionally in death. The gums assume a blue tinge.

Morbid Appearances.—An exsanguine appearance of the intestines; but occasionally there is inflammation of the mucous membrane of the intestines, sometimes attended with blotches of extravasated blood. When the death of the patient is not sudden, the mesenteric and lymphatic glands are inflamed and obstructed; and all the viscera bear more or less evidence of having suffered from increased vascular action; and lead has been found in the muscles of the part previously paralysed.

Test.—When the poison has been swallowed in the solid form, and any of it can be obtained, it may be known in some degree by its colour and weight, or by rubbing it in a mortar with a little tincture of guaiacum and a few drops of solution of ammonia, which produce a beautiful grass green, passing to glaucous when lead is present; it is tinged brown when it is exposed to sulphuretted hydrogen gas. Or it may be dissolved in weak nitric acid, and the solution precipitated by iodide of potassium; if lead be present, the yellow iodide of that metal will be formed; but it is still more certainly detected by reducing it to a metallic state upon charcoal, by means of the blowpipe.

When it has been taken in syrup, or in wine, or in hollands, to improve which it is often ignorantly and improperly used, first render the coloured fluids colourless by chlorine, and then add to different portions the following reagents:—Sulphate of potassium, which will produce a white; sulphuretted hydrogen, which will throw down a black; and chromate of potassium, which will exhibit a canary yellow precipitate, if any salt of lead be present. Or dissolve in acetic acid, and add to the solution a solution of iodide of potassium; if the poison be carbonate of lead, a yellow iodide of lead will be precipitated.

Treatment.—Use stomach-pump, or emetics, freely exhibit cathartics, particularly castor oil, and sulphate of magnesium combined with opium or extract of hyoscyamus; use the warm bath, and hypodermic injection of morphine if there is much pain. The patient should drink very freely mucilaginous liquids. When convalescent, he should live almost entirely on a milk diet. If paralysis of the limbs continue, it should be treated with strychnine and iodide of potassium.

* The acetate and diacetate are certainly poisonous in large doses even when free acid is present. (*Taylor's Med. Jur.*)

*** The action of acetate of lead, and of red oxide of lead or litharge, on the animal economy, is nearly the same as that of the carbonate of lead; consequently the above observations apply to all the salts of lead.

CARBOLIC ACID. See *Symptoms and Treatment of Creasote*.

CARBONIC ACID GAS. This gas is often extricated very largely in various processes of art, and in burning charcoal in close rooms, so as to produce suspended animation and death. As it is also very heavy, it remains in fermenting vats and beer cellars long after the liquor has been drawn off or removed; hence fatal accidents often occur.

Symptoms.—Great drowsiness, difficulty of respiration, and suffocation. The features appear swelled and the face bluish, as in cases of strangulation; but the eyes remain as brilliant as in health, even after death.

Test.—Before any disturbance of the atmosphere in which the suspended animation or death has taken place, invert in it a bottle filled with lime-water and allow half of the fluid to run out; at the same time introduce a lighted taper into the same atmosphere. If the taper be extinguished, and lime-water, on being shaken in the bottle, becomes milky, the deleterious gas is carbonic acid gas.

Treatment.—Remove the body into the open air; apply friction, particularly over the thorax and on the soles of the feet; then endeavour to stimulate the organs of respiration to a renewed action by performing artificial respiration. Stimulate, cautiously, the nostrils with ammonia, and dash cold water on the face and chest.

CHLORIDE OF BARIUM. (*Barii Chloridum.*) An acrid poison.

Symptoms.—Sensation of burning in the stomach, vomitings, headache, deafness, convulsions, death.

Tests.—Soluble in water; the solution precipitates nitrate of silver white, sulphuric acid and the sulphates also white; the precipitates are insoluble in water and nitric acid.

Treatment.—Sulphate of sodium, or of magnesium, in solution, freely administered; then empty the stomach by an emetic, and afterwards administer opium.

CHLORINE GAS. An acrid poison.

Symptoms.—Severe constriction of the glottis, cough, sensation of suffocation alternating with asphyxia; afterwards, if death do not ensue, inflammation of the larynx, and pneumonic inflammation.

Treatment.—Inhalation of the vapour of hot water containing carbonate of ammonium. Inhalation of a small quantity of sulphuretted hydrogen has also given relief.

CHLOROFORM. (*CHLOROFORMUM.*) *Chloroform.* Narcotic Poison.

Symptoms.—Chloroform gives rise to vomiting, headache, convulsions, anæsthesia, unconsciousness, and, at times, fatal depression and prostration. It has been attempted to apply it to passengers in the street; but if the person be sober and compos mentis, the danger is slight. The deaths which have occurred have been in cases where it has been used as a remedy.

Morbid Appearances.—Congestion of lungs and large vessels of the heart.

Treatment.—Death has been in most cases so sudden as to preclude the possibility of using any remedies. The best restorative is atmospheric

air. Ammonia may be applied to the nostrils, the cold douche to the head, and even artificial respiration may be had recourse to; but no stimulants should be given.

COCCULUS INDICUS. (*Anamirtæ Cocculi fructus.*) An acro-narcotic vegetable poison, deriving its poisoning powers from *picrotoxin*.

Symptoms.—These closely resemble those of intoxication from ardent spirits.

Morbid Appearances.—There is no instance on record of the examination of a human body destroyed by this poison.

Test.—That this poison has been the cause of death, or of powerfully deleterious effects on the human body, cannot be ascertained by any test. The fruit is externally blackish, about the size of a pea, whitish within, and has a very bitter taste, not easily removed from the palate.

Treatment.—Encourage vomiting, and purge freely. Chloral and bromide of potassium may be employed.

COLCHICUM. See *Meadow Saffron*.

CONGER.

Symptoms.—This fish, although it is frequently eaten with impunity, yet has, in some instances, produced all the symptoms of cholera morbus, succeeded by paralysis of the lower extremities.

Treatment.—Evacuate the contents of the stomach and bowels, after having allayed their irritability by opium. Dilute freely with saccharine and acidulous liquids.

COPPER, POISONOUS SALTS OF. See *Verdigris*.

CORROSIVE SUBLIMATE. (*Hydrargyri Perchloridum.*) A corrosive metallic poison.

Symptoms.—An acrid, styptic, metallic taste, with the sensation of fulness and burning in the throat; copious salivation, but not always; great anxiety; tearing pains of the stomach and intestines; nausea; frequent vomiting of a fluid occasionally mixed with blood; diarrhoea, tenesmus; the pulse small, quick, and hard; frequent faintings; universal debility; difficult respiration; cold sweats; cramps of all the members; convulsions; and death.

Morbid Appearances.—General inflammation of the intestinal passages; swelling and a livid colour of the palate and fauces; epiglottis, trachea, and bronchial tubes injected; œsophagus of a white colour. In some cases red and black spots have been found in the cavities of the heart; constriction of the intestinal canal, with marks of gangrene, sometimes with perforation of the viscus: and in general the mucous membrane of the stomach is detached.

Tests.—1. If the poison be found in the solid state, its nature may be suspected by its sensible qualities; but to ascertain the truth, mix the suspected substance with an equal weight of very dry carbonate of potassium; then put the mixture into a small glass tube, and heat it gradually to redness; if it be corrosive sublimate, mercury will be obtained in metallic globules.

2. If the suspected poison be a fluid and a colourless liquid, place in it a wire of clean polished copper twisted round a sovereign, and allow it to remain for a short time, when the gold will be covered with a white coating that will acquire a metallic lustre when rubbed, if corrosive sublimate be the poison; or pour into it lime-water, or liquor potassæ, which will produce an orange-yellow precipitate, if

the salt be present. The solution of iodide of potassium will precipitate scarlet biniodide of mercury.

3. If the solvent be wine, coffee, or any coloured liquid, agitate it slowly for ten minutes in a phial, with two or three drachms of ether; then, after the fluids have separated by rest, pour off the ether, and evaporate it in a small porcelain capsule. If corrosive sublimate be present, it will remain in a crystallised form in the capsule; and that it is that salt may be proved by dissolving these crystals in water, and precipitating the solution, as already described, with lime-water, or solution of potash, or iodide of potassium.
4. To the suspected solution add a solution of protochloride of tin; then, after a short time, add more, and leave the precipitate to subside. Pour off the fluid, and wash the precipitate repeatedly; a globule of mercury will remain.

Treatment.—Give large quantities of white of egg diluted in water in repeated doses. The albumen decomposes the corrosive sublimate, and reduces it to a state of calomel, and the protoxide, which, acting on the bowels, carries itself off by purging. The poison is also reduced to calomel by a mixture of soap and the gluten of wheat flour. Employ mustard, zinc sulphate, or ipecacuanha wine as emetic. Bleeding is requisite if the pulse be quick and hard. The warm bath may also be employed; and during convalescence the patient should subsist altogether on broths, milk, and demulcent fluids.

CREASOTE. An acrid poison.

Symptoms.—It operates as a powerful topical excitant, causing inflammation of the tissue with which it comes in contact, and destroying life by the sympathetic depression of the nervous system it induces.

Tests.—Distinguished by its odour, that of smoked meat and tar. When very dilute it gives a green colour with a drop of a neutral solution of ferric chloride; this colour rapidly changes to a reddish-brown.

Treatment.—Administer freely white of eggs, soda, or saccharated lime, then give direct emetics; and treat the inflammatory symptoms as in a case of gastritis.

CUSPARIA, FALSE. Supposed to be the bark of *Strychnos Nuxvomica*. The symptoms it causes are similar to those from *nuxvomica*.

Test.—Pieces rough, covered with a whitish dust; they have no odour, are intensely bitter, heavy, resinous in the fracture, inner surface reddened to blood colour by nitric acid; the infusion reddens litmus; perchloride of iron changes it to green.

Treatment.—See *Nux Vomica*.

CYCLAMEN. See *Sow Bread*.

DEADLY NIGHTSHADE. (*Atropa Belladonna*.) An acro-narcotic vegetable poison.

Symptoms.—A sense of great dryness and constriction of the pharynx and œsophagus; sickness, vertigo, dilated pupils and dimness of sight; laughter, delirium, redness and tumefaction of the face; convulsions. The stomach and bowels become sometimes so paralysed that vomiting can scarcely be produced by the most powerful emetics; and death follows.

Morbid Appearances.—The body swells greatly after death, whilst blood flows from the nose, mouth, and ears, and rapid putrefaction ensues. The stomach and intestines display marks of high inflammatory

action, and the vessels of the brain are generally found turgid with blood.

Test.—Solution of atropine in water gives a yellow precipitate with perchloride of gold; but the botanical characters both of the leaves and the fruit should be familiar to every practitioner. The berries, which are most likely to be eaten by children, are large, roundish, with a longitudinal furrow on each side, of a very deep purple colour, smooth, shining, and seated within a permanent green flower-cup or calyx. Their taste is sweet and agreeable.

Treatment.—Give emetics of sulphate of zinc or of copper; then evacuate the bowels by active purgatives and clysters; and follow these by large doses of vinegar and water, or other vegetable acids. The previous use of vinegar has been recommended, and it is said the emetics act with more certainty after its use; after the vomiting strong coffee proves very efficacious. Hypodermic injection of half a grain of pilocarpine has been recommended.

DIGITALIS. See *Foxglove*.

ELATERIUM. (*Ecballii Elaterii fructus et fecula.*) An acro-narcotic poison.

Symptoms.—Violent sickness, vomiting, and hypercatharsis; the stools being of the most watery consistence; and followed by sudden and excessive debility, cold clammy sweats, and death.

Morbid Appearances.—When the dose has been very large, the whole mucous membrane of the stomach and intestines appears in some degree inflamed; but when the fruit has been eaten, or the dose of the elaterium which has been taken is small, the rectum only presents marks of inflammatory action.

Test.—The elaterium can be recognised by its physical qualities; with melted carbolic acid it yields a solution which becomes first crimson, and then scarlet, on the addition of sulphuric acid; the fruit is a hairy small pepo.

Treatment.—Little is to be done except with stimulants and opium, and the exhibition of enemata of starch, opium, and camphor.

EUPHORBIIUM. See *Spurge*.

FOXGLOVE. (*Digitalis Purpureæ folia.*) An acro-narcotic vegetable poison.

Symptoms.—Intermitting pulse, vertigo, indistinct vision, nausea, vomiting and purging, hiccough, cold sweats, delirium, syncope, convulsions, and death.

Morbid Appearances.—The stomach and intestinal canal display scarcely any morbid alteration; but the lungs are crepitant, and the blood contained in the ventricles is generally in a fluid state.

Test.—Unless the plant or the entire leaves be found in the recent or properly dried state, or the powder be procured, it is impossible to determine that this poison has been employed, except from the symptoms.

Treatment.—Employ stomach-pump, or emetic of mustard, zinc sulphate, or apomorphine; exhibit stimulants, as, for example, brandy, aromatic confection, and opium; and apply a blister to the pit of the stomach. Maintain recumbent posture.

FUNGUSES, comprehending **AGARICS** and **POISONOUS MUSH-ROOMS.** (*Fungi.*) Acro-narcotic vegetable poisons.

Symptoms.—Different funguses produce different effects on the animal

system. The more general symptoms, which usually occur from six to twenty hours after eating them, are pains of the stomach, nausea, vomiting, and purging; colic; cramp of the lower extremities; convulsions, both general and partial; an unquenchable thirst, vertigo, delirium, coma, and death. The intellect remains entire to the last moment of life.

Morbid Appearances.—Numerous black blotches on the skin over the whole surface of the body; the abdomen much blown up; the pupils contracted; the stomach and intestines inflamed, gangrenous, and strongly contracted in many places; the lungs inflamed, and gorged with black blood; the liver and spleen in the same state; the membranes of the brain, also, present marks of inflammation; and sphacelated spots are seen on almost every viscus. The blood is always found coagulated; and, in every instance, there is a remarkable flexibility of the members.

Test.—There are no means of ascertaining that a person has been poisoned by these vegetables, unless some of the plants be found; in which case their deleterious properties are known by their botanical characters. As a general rule, those which have an acrid juice, a leathery dull-coloured flesh, which grow in obscure, shady places, or on the trunks of decayed trees, or on rocks, which have a glary or very shining surface, or an offensive odour, or become brown when cut, are to be rejected.

They may be tested by cutting them, and applying a piece of silver to the cut surface; if it be blackened, the mushroom is bad. Cooking fungi with vinegar or lemon juice aids greatly in destroying their poisonous properties.

Treatment.—First evacuate the poisonous substances by emetics and purgatives, or by combinations of these; for example, three or four grains of tartar emetic, or twenty-four of ipecacuanha powder, in solution with two ounces of sulphate of sodium. Castor oil is a valuable purgative in these cases. The lancet is sometimes necessary. After the stomach and bowels have been emptied, give small but repeated doses of ether in mucilage, and dilute with vinegar or other acidulated liquids. The debility subsequent to the effects of these poisons, when the fatal issue is averted, must be treated with cinchona and other tonics.

GAMBOGE. (*Cambogia*.) An acrid vegetable poison.

Symptoms.—Violent vomitings, colic, and hypercatharsis, followed by great prostration of strength, and death.

Morbid Appearances.—Slight inflammation of the mucous membrane of the stomach and intestines, and marks of strong vascular action in the rectum.

Test.—This poison is easily detected by its beautiful yellow colour, and the tinge it communicates to the whole mucous membrane of the intestines.

Treatment.—Carbonate of potassium in demulcent and mucilaginous liquids and milk should be freely administered; and after the poison is supposed to be wholly evacuated, small doses of opium at short intervals.

HELLEBORE ROOT—BLACK. (*Hellebori Nigri Radix*.) An acrid vegetable poison.

Symptoms.—Severe pain of the stomach and intestines, violent vomiting, vertigo, excessive debility, salivation, convulsions, sometimes

opisthotonos, sometimes emprosthotonos, and death. It produces the same effects when it is applied to a wound.

Morbid Appearances.—Evident signs of inflammation in the alimentary canal, but more particularly in the larger intestines. The limbs remain remarkably flexible after death.

Treatment.—The poison is generally thrown out of the stomach by the vomiting it occasions. This should be assisted, however, by copious dilution with mild mucilaginous fluids, and be followed by antiphlogistic measures.

HELLEBORE ROOT—WHITE. (*Veratri Albi Radix.*) An acrid vegetable poison, deriving its poisonous properties from a salt of veratrine.

Symptoms.—Vomiting and hypercatharsis, with bloody stools; great anxiety, tremors, vertigo, syncope, sinking of the pulse, cold sweats, convulsions, and death. Nearly the same symptoms are produced by the application of the root to an ulcerated surface.

Morbid Appearances.—Slight inflammation of the stomach and bowels. Considerable inflammation of the rectum, which often presents sphacelated spots. The lungs are generally gorged with blood.

Treatment.—Evacuate the stomach by copious draughts of oily and mucilaginous liquids, and exhibit emollient enemas to soothe the rectum. Then administer acidulous fluids, coffee, and camphor, and employ antiphlogistic measures. Allay the action of the poison on the rectum by emollient clysters. Coffee is said to be the antidote of this poison. Maintain recumbent posture.

* * The same instructions will serve in cases of poisoning by *Fætid Hellebore*, *Bryony*, *Sabadilla*, *Ranunculus*, *Arum*, &c.

HEMLOCK. (*Conii Maculati folia et radix.*) A narcotic vegetable poison, deriving its deleterious properties from an alkaline principle called Conine.

Symptoms.—Weakness of legs, and staggering gait; sickness, difficulty of respiration, great anxiety, vertigo; delirium, which often rises to maniacal frenzy; dilatation of the pupils, stupor, trismus, convulsions, and death.

Morbid Appearances.—Scarcely any marks of inflammation are perceptible in the stomach or the intestines, except in the rectum, in which red blotches are observed. The vessels of the brain are gorged with very fluid blood; evidences of strong inflammation having existed in that organ also present themselves.

Test.—The plant has a biennial root, with circular marks; the stem is annual, herbaceous, striated, and maculated with dark purple blotches; the leaves are large, alternate, supradecomposed, and, when rubbed with solution of potash, evolve an offensive odour.

Treatment.—Evacuate the stomach by a scruple of sulphate of zinc, dissolved in an ounce of water, or by some other powerful emetic; the affusion of cold water on the head; and administer freely vinegar and water, or any other acidulous liquid. Employ stimulants and artificial respiration, if necessary.

HENBANE. (*Hyoscyami folia et semina.*) A narcotic vegetable poison, deriving its poisonous properties from Hyoscyamine.

Symptoms.—Sickness, stupor, dimness of sight, and delirium, followed by coma, and great dilatation of the pupils; the pulse is at first hard, but becomes gradually weaker and tremulous; petechiæ often make their appearance as the forerunners of death.

Morbid Appearances.—Inflammation of the stomach, the intestines, and the membranes of the brain.

Test.—The plant is recognised by its pale green, angular, viscid, or clammy leaves; its disagreeable odour, its flowers and seed-vessels being on one side of the flowering spike with leaves on the other; its capsular fruit, furnished with a persistent calyx, bilocular, and opening with a lid.

Treatment.—If the poison have been recently taken, evacuate the stomach by a powerful emetic, and afterwards administer vinegar and acidulous drinks; but if the poison have already entered the system, bleed and purge freely to reduce the inflammatory symptoms, exhibiting, at the same time, acidulous liquids. Hypodermic injection of pilocarpine (gr.ss.) and artificial respiration have been recommended.

HYDROCYANIC ACID. See *Prussic Acid*.

IODINE. An acrid mineral poison.

Symptoms.—In doses of gr. 10 to 30, iodine causes heat and constriction of the fauces, nausea, offensive eructations, pain in the epigastrium, vain efforts at vomiting, colic, quickening of the pulse, diarrhœa, tremblings, great thirst, slight convulsions, death. When poisoning occurs from small doses long continued, emaciation and debility are extreme.

Morbid Appearances.—Distension and inflammation of the stomach and intestines; sphacelation in some parts; pale, voluminous liver.

Tests.—Iodine in the solid form is in bluish-grey scales, having the odour of chlorine; heated in a tube, it affords violet vapour; added to cold mucilage of starch it gives it a deep blue colour. If the poison be contained in animal fluids, pass through them a stream of sulphuretted hydrogen, then boil, saturate with solution of potash, and having added cold mucilage of starch, pour on the filtered solution some chlorine gas; the blue colour will indicate the poison. The same process will detect it in the stomach.

Treatment.—Administer mucilage of starch freely, then empty the stomach by direct emetics; and treat the inflammatory symptoms as a case of simple gastritis. Relieve pain with hypodermic injection of morphine.

IODIDE OF POTASSIUM. (*Potassii Iodidum*.)

Symptoms.—Uneasiness of stomach, followed by nausea and a burning pain in that organ; vomiting, cephalalgia, vertigo, tremors.

Morbid Appearances.—The stomach contracted; ecchymosed spots on its lining membrane; slight ulcerations; some traces of inflammation in the intestinal tube.

Tests.—The crystals of the salts are cubes, of an acrid, sharp taste, slightly deliquescent; its solution, mixed with starch and treated with chlorine or with nitrous acid, forms the blue iodide of amidin; the perchloride of mercury forms a beautiful scarlet precipitate of the biniodide of mercury. Test the urine, after mixing it with starch, with gaseous chlorine. This gas will detect 1 part in 1,500,000 of urine, which should be cold before it is tested.

Treatment.—The same as in cases of poisoning by iodine.

IODIDES OF MERCURY. (*Hydrargyri Protiodidum et Biniodidum*.)

Symptoms.—Nearly the same as those caused by corrosive sublimate.

Tests.—When the protiodide is heated in a glass tube, it evolves vapour

of iodine; if previously mixed with solution of potash, the heating sublimes metallic mercury, and leaves iodide of potassium. The biniodide sublimes yellow when heated, and changes to red as it cools; in other respects it may be tested in the same manner as the protiodide.

Treatment.—The same as in cases of poisoning by corrosive sublimate.

LAUDANUM. See *Opium*.

LAUREL WATER. (*Aqua destillata Cerasi Laurocerasi*.) A narcotic vegetable poison, deriving its poisonous powers from hydrocyanic acid.

Symptoms.—Sudden death, without vomiting, convulsions, or any of the other symptoms which usually precede it in cases of poisoning. Insensibility when the death is not very sudden. In some instances, violent pain of the stomach has been complained of immediately before the fatal termination.

Morbid Appearances.—Very slight appearances of redness in the stomach; but all the other organs are in a natural state.

Test.—Strong smell of bitter almonds. The hydrocyanic acid which it contains is readily rendered obvious, which, added to its odour, enables the poison to be satisfactorily detected. See *Prussic Acid*.

Treatment.—The fatal effect of this poison is so quickly produced, that little opportunity is afforded for the trial of antidotes. Brandy, ammonia, and other stimulants may prove useful. Chlorine has been proposed.

LIME. (*Calx*.) A corrosive mineral poison.

Symptoms.—Great heat of the throat, nausea, vomiting, epigastralgia, and insupportable colic, with all the symptoms which characterise inflammation of the stomach and intestines.

Morbid Appearances.—Intense inflammation of all the membranes with which the poison has come in contact.

Test.—If any of the poison be found, pour over it distilled water; then stop the vessel closely from the atmospheric air, and after some time filter the supernatant fluid. If this have a strong, acrid, styptic taste, if it change to green the vegetable blues, and be precipitated by oxalic acid, and if, on exposure to the air, a pellicle be formed which is soluble with effervescence in vinegar or any acid, we may pronounce the poison to be lime. If none of the poison be found, and nevertheless it is suspected to be lime, calcine the contents of the stomach and bowels, and treat the residue as above directed.

Treatment.—Vinegar, lemon juice, or any vegetable acid, should be freely administered, and then demulcents; employing every means that can reduce the inflammatory action excited in the abdominal viscera.

MEADOW SAFFRON. (*Colchici Autumnalis semina et cormus*.) An acro-narcotic vegetable poison.

Symptoms.—Nausea and vomiting, violent griping and hypercatharsis, rapid sinking of the pulse, and cold sweats.

Morbid Appearances.—Slight inflammation of the stomach and intestines; but the effect is chiefly produced by the action of the poison on the nervous system.

Test.—None.

Treatment.—Evacuate the stomach by bland demulcent fluids taken in large doses; then exhibit opium in small doses, with stimulants.

MONKSHOOD. (*Aconiti folia, flores, et semina.*) An acro-narcotic poison, deriving its poisonous properties from the alkaloid Aconitine.

Symptoms.—Vomiting, or attempts to vomit, heat in the throat, tingling of mouth, lips, tongue, and of fingers, and gradual loss of sensation; perfect consciousness and intelligence until just before death; diminution of muscular power, but still ability to walk about until within a few minutes of death; disordered vision, and contracted pupil; hypercatharsis; bloody stools; collapse usually after slight exertion; generally no convulsions.

Morbid Appearances.—Intense congestion of brain; very slight appearances of inflammation in the stomach, livid blotches appear on the body; its effects appear to depend altogether on its action on the nervous system.

Test.—No chemical test.

Treatment.—Evacuate the substance from the stomach, and then administer freely acidulous fluids and stimulants. External warmth, sinapisms. Hypodermic injections of atropine and of digitalis have been recommended. Inhalations of nitrite of amyl sometimes useful.

MORPHINE—ACETATE OF—HYDROCHLORATE OF. (*Morphine Acetas et Hydrochloras.*)

Symptoms.—Morphine in poisonous doses causes nearly the same symptoms as opium; the acetate and hydrochlorate, in doses of three to six grains, cause headache, vertigo, dimness of sight, contraction of the pupils, vomiting, colic, diarrhœa succeeded by obstinate constipation, retention of urine, great itching of the skin, sometimes accompanied with a papular eruption and profuse sweats, convulsions, sometimes of a tetanic, sometimes of an epileptic character. The acetate, in particular, causes tetanic twitching resembling electric shocks, not of itself a fatal symptom. In these large doses the symptoms of this poison terminate in death.

Morbid Appearances.—An injected state of the mucous membrane, and of the membranes of the brain, especially in the anterior part of the head.

Tests.—Nitric acid tinges morphine and its salts red; with solution of perchloride of iron they give a greenish blue. When warmed with strong sulphuric acid and a little arseniate of sodium, a bluish-green tinge results.

Treatment.—The same as in poisoning by opium.

MURIATIC (HYDROCHLORIC) ACID. (*Acidum Hydrochloricum.*)
A corrosive mineral poison.

Symptoms.—Sensation of burning in the throat, the œsophagus, and the stomach; styptic taste in the mouth; great thirst; the eyes red and sparkling; the pulse very frequent and tense; and the skin hot and dry; the tongue red and glazed; the lips black; vomiting of blood and yellow matter, having the pungent odour of the acid; cold sweats, delirium, and death. These are the symptoms attending poisoning by any of the mineral acids.

Morbid Appearances.—The mouth, œsophagus, and stomach are of a deep red colour, and partially covered with extravasated blood; they are also often perforated in many places.

Test.—When any of the acid which has been used as the poison remains, it is readily detected by its sensible qualities, and by the white dense fumes of hydrochlorate of ammonium which are formed when a glass rod dipped in ammonia is approached to it. If mixed

with wine, or other coloured fluids, it may be detected by distilling the suspected fluid from a small retort, into a phial containing a solution of nitrate of silver; the chloride of silver will be thus formed, which is known by its solubility in ammonia, and its insolubility in nitric acid. If the contents of the stomach or the vomited matter only can be procured, boil these for three-quarters of an hour in combination with a dilute solution of potash, and precipitate the filtered fluid with nitrate of silver, which will form the chloride of silver, if the poison be hydrochloric acid.

Treatment.—Administer immediately soap and calcined magnesia, mixed in bland demulcent fluids. Give, freely, emollient diluents, and employ antiphlogistic means to overcome the inflammatory symptoms that supervene, when the poison does not prove very soon fatal. Relieve pain by hypodermic injection of morphine.

MURIATE or HYDROCHLORATE OF BARYTA, or CHLORIDE OF BARIUM. (*Barii Chloridum.*) A corrosive mineral poison.

Symptoms.—Violent vomiting, accompanied with excruciating, burning pains of the stomach and bowels; vertigo, stupor, paralysis of the lower extremities, convulsions, and death. Independent of its corrosive property, it acts on the brain and nervous system; the action of the heart is rapid and intermitting; respiration is momentarily suspended; the pupils dilate, and insensibility supervenes.

Morbid Appearances.—Evidences of inflammation of the mucous membrane of the stomach throughout its whole extent.

Tests.—If any of the poison be found, chloride of barium may be detected in it by dropping into it a little sulphuric acid, when a white precipitate will be formed which is insoluble in nitric acid, or by the suspected fluid yielding with nitrate of silver a white curdled or clotted precipitate, insoluble in water and in nitric acid, but soluble in strong solution of ammonia. If the menstruum be red wine or coffee, the mixture is turbid; it should be filtered, and its colour destroyed by chlorine before testing it. The excess of chlorine, however, must be previously dissipated by heat, when the nitrate of silver is employed as a test.

Treatment.—As soon as possible, dilute largely with bland fluids holding in solution sulphate of sodium or of magnesium: for these salts decompose the chloride of barium, and form an inert insoluble sulphate in the stomach; then excite vomiting by irritating the fauces, by sulphate of zinc, or by hypodermic injection of apomorphine; afterwards treat the case as one of gastric inflammation.

* * * The other salts of barium produce nearly the same effects on the animal economy as the chloride; and therefore these instructions refer equally to cases of poisoning by acetate, nitrate, carbonate of barium, or by pure baryta.

MURIATE or HYDROCHLORATE OF ANTIMONY—BUTTER OF ANTIMONY. (*Antimonii Hydrochloras.*) A corrosive mineral poison.

Symptoms.—Excruciating pains of the stomach, violent vomiting, hypercatharsis, convulsions, syncope, and death.

Morbid Appearances.—The mucous membrane of the stomach and intestines is inflamed throughout, and in some places eroded and gangrenous. The brain also presents evidence of having suffered from strong inflammatory excitement.

Test. Mix the suspected substance with carbonate of potassium and charcoal, and calcine the mixture; the result should be chloride of

potassium, metallic antimony, and carbonic acid gas. The butter of antimony is decomposed by water, which forms a white precipitate; and by the hydrosulphides, which precipitate it of an orange colour.
Treatment.—See *Tartar Emetic*.

MURIATE or CHLORIDE OF TIN. (*Stanni Chloridum*.) A corrosive metallic poison.

Symptoms.—An austere metallic taste; constriction of the oesophagus; impeded respiration; violent vomiting, with cramp of the stomach and excruciating colic pains, purging, the pulse small, but sharp and quick; convulsions, sometimes paralysis, asphyxia, and death.

Morbid Appearances.—Inflammation and erosion of the stomach and intestines.

Test.—This salt, in the solid state, is in small acicular crystals, of a yellowish-white colour; deliquescent in the air, and reddening the vegetable blues. Mix the solid salt in a crucible, with charcoal and caustic potash (*potassa fusa*), and, covering the crucible with charcoal, expose it to a strong heat for twenty minutes. The result should be metallic tin and chloride of potassium. If the poison be in solution, precipitate separate portions of it by the following reagents: solution of potash, or of ferrocyanide of potassium, which throw down white precipitates; and the hydrosulphides, which form yellow precipitates; perchloride of mercury, which forms a grey precipitate composed of grains of metallic mercury; and nitrate of silver, which precipitates clots of chloride of silver. If the solvents be wine or coffee, the solution must be freed from colour by chlorine before being tested.

Treatment.—Dilute copiously with milk, which appears to decompose the chloride; then excite vomiting by large draughts of tepid water and irritating the fauces. Employ warm baths, fomentations, and emollient enemas, to combat the inflammatory symptoms; administering, at the same time, opiates and antispasmodics to soothe the nervous irritation.

THE MUSSEL. A septic animal poison.

Symptoms.—Sensation of weight at the stomach, nausea, constriction of the throat, immoderate thirst, vomiting, stertorous breathing, vertigo, itching, and sometimes an eruption all over the skin; low tremulous pulse, subsultus, and coldness of the extremities, occasionally terminating in death.

Morbid Appearances.—Slight evidences of inflammation of the mucous membrane of the stomach. A dark foetid fluid is present in the stomach; and the whole body rapidly undergoes putrefaction.

Test.—None.

Treatment.—Evacuate the stomach by a powerful emetic, and by irritating the fauces with the finger or a feather, until full vomiting be excited: purge with castor oil; and, at the same time, dilute freely with acidulous liquids, giving, at short intervals, from twenty to sixty drops of ether in half an ounce of simple syrup.

*** These remarks apply generally to all cases of poisoning by fish. It is probable that the poisonous properties of fish depend chiefly on an unhealthy state of the fish itself.

NITRATE OF COPPER. See under *Sulphate of Copper*.

NITRE—NITRATE OF POTASSIUM. (*Potassii Nitras*.) An acrid mineral poison.

Symptoms.—When taken in doses of half an ounce to an ounce, which has too frequently happened from the salt being sold by mistake for sulphate of sodium, it excites nausea, vomiting, and hypercatharsis; bloody stools, excruciating tormina of the lower bowels, the sensation of fire in the stomach, laborious respiration, cold extremities, syncope, convulsions, and sometimes death. If the patient live, he may remain paralytic.

Morbid Appearances.—Inflammation and sphacelation of the mucous membrane of the stomach, which has been occasionally found perforated. The evidences of inflammation extend throughout the intestinal canal.

Test.—The form of its crystals, if any of the salt remain, instantly distinguishes nitre from sulphate of sodium; but if it be in powder, it may be known by deflagrating when it is thrown upon hot coals, and by giving out nitrous acid fumes when hot sulphuric acid is poured on it. If the salt be in solution, add protosulphate of iron and sulphuric acid; the nitric acid extricated acting on the salt of iron will darken the colour of the solution.

Treatment.—Empty the stomach, and dilute freely with milk and bland demulcents; exhibit emollient enemas; and administer opium and stimulants.

NITRATE OF SILVER, or LUNAR CAUSTIC. (*Argenti Nitras.*)
A corrosive metallic poison.

Symptoms.—Nearly the same as those produced by corrosive sublimate; in general the pain of the stomach is more severe; greatly embarrassed respiration.

Morbid Appearances.—The organs of deglutition and the stomach present evident marks of inflammation and erosion. The mucous membrane of the stomach presents a black colour; the lips, the interior of the mouth, the œsophagus, are also black. The fingers are sometimes tinged with the same colour.

Tests.—If the poison have been taken in solution in water, it is detected by arsenious acid mixed with ammonia precipitating a yellow arsenite of silver. Ammonia does not render the solution turbid, but it is precipitated olive colour by all the other alkalis. A stick of phosphorus placed in it precipitates the silver in a metallic state. All the hydrochlorates decompose it, and throw down a white precipitate, which is changed to black by the light; put these precipitates into a tube open at both ends and heated, pass through it a stream of hydrogen gas; the chloride first becomes yellow, then fuses and changes to red, which gradually weakens in depth, and leaves a coating of metallic silver on the tube.

Treatment.—Administer, instantly, a strong solution of common salt, to form an insoluble chloride of silver in the stomach. Then evacuate the stomach by an emetic; and, if symptoms of inflammation nevertheless supervene, employ local and general bleeding, tepid baths, and emollient fomentations and clysters.

NITRATE OF BISMUTH. (*Bismuthi Nitras, Bismuthum Album.*) A corrosive metallic poison.

Symptoms.—Nearly the same as those of corrosive sublimate, with a sensation of great heat in the chest, and difficulty of breathing.

Morbid Appearances.—Inflammation and erosion of the mucous membrane of the stomach, which is almost reduced to a state of pulp, and separates by the slightest friction. The inflammation extends throughout the intestines, and the lungs also display traces of it.

Tests.—The best test is chromate of potassium, which precipitates it from its aqueous solution of a beautiful orange-yellow colour. It may be detected in the solid contents of the stomach by calcination; in the fluid contents by passing through them a stream of sulphuretted hydrogen gas, dissolving the precipitate in hydrochloric acid, filtering the solution, and testing with ferrocyanide of potassium, which forms a yellowish-white precipitate.

Treatment.—Exhibit large draughts of milk, which is firmly coagulated into clots by the nitrate of bismuth, and, involving the poison, affords time and opportunity to expel it from the stomach. If symptoms of inflammation show themselves, combat them by bleeding and other antiphlogistic measures.

NITRIC ACID, NITROUS ACID—AQUAFORTIS. (*Acidum Nitricum, Nitrosium.*) Corrosive mineral poison.

Symptoms.—Sensation of burning in the throat, œsophagus, and stomach; excessive vomiting, and almost immediate death, if the acid be strong, and the dose large; but if it be weak, the patient may linger for a considerable time, in which case he vomits at intervals shreds of membrane, which have an insupportable fœtor; the constipation of the bowels is the most obstinate; and when dejections are obtained, they are attended with excruciating torture.

Morbid Appearances.—When death has quickly taken place, the most characteristic feature displayed on dissection is a layer of yellow matter, which covers the mucous membrane of the œsophagus, the stomach, and every part over which the poison has passed. This membrane is also converted into a fatty substance, and the stomach is often found perforated. The lip, the chin, and the hands of the patient are also stained with orange-coloured spots.

Tests.—Boil the fluid, if any remain unswallowed, over copper-filings, when orange-coloured fumes will be given off if nitric acid be present. Add morphine, which will be reddened, or add carbonate of potassium, which will form a deflagrating salt, if the acid is nitric. In a diluted state this acid blackens the solution of protosulphate of iron. When none of the poison remains, and death has taken place, saturate the contents of the stomach with bicarbonate of potassium; evaporate the filtered solution to dryness, add to the residue copper-filings and sulphuric acid, and receive the fumes on morphine, or a solution of protosulphate of iron; redness in the former and dark olive in the latter prove the presence of nitric acid.

Treatment.—Give large doses of a solution of soap, or a mixture of calcined magnesia in water or any bland fluid. Then evacuate the stomach by large draughts of demulcent fluids. Inject morphine subcutaneously to allay pain; if there is much difficulty in respiration, tracheotomy will be necessary.

NUX VOMICA. (*Strychni Nucis-vomicæ fructus.*) An acro-narcotic vegetable poison.

Symptoms.—Sensations of inebriety; vertigo; tetanic twitchings, and rigidity of the limbs and arms, alternating with subsultus tendinum; extreme difficulty of respiration, with excruciating pain under the xiphoid cartilage; asphyxia; and death.

Morbid Appearances.—Scarcely any evidences of inflammation of the mucous membrane of the stomach or intestines; the lungs appear natural; but the left ventricle of the heart is generally gorged with

blood, and the whole of the arteries contracted. This poison acts chiefly on the spinal cord.

Test.—Powder grey, inodorous, very bitter; gives an orange-yellow colour to nitric acid. Digest in alcohol and evaporate; take up the extract with water acidulated with sulphuric acid; then boil with a slight excess of lime; wash the precipitate and act upon it with boiling alcohol, leave to spontaneous evaporation, and test the residue as for strychnine.

Treatment.—Evacuate the stomach and bowels, and then dilute freely with vinegar and water, and other acidulous drinks. (See *Strychnine*.)

OPIUM. (*Opium*.) A narcotic vegetable poison.

Symptoms.—Drowsiness and stupor, which are followed by delirium, pallid countenance, contraction of pupil, sighing, deep and stertorous breathing, cold sweats, coma, and death.

Morbid Appearances.—Slight redness of the stomach and intestines; but there are no evidences of an inflammatory state of the brain or its membranes.

Test.—Wash the contents of the stomach and intestines in distilled vinegar, and strain; then test a portion with perchloride of iron to detect meconic acid, which gives it a cherry-red colour. To another portion add solution of acetate of lead, and separate the precipitate by filtration; wash it well, then mix it with water, and pass through a stream of sulphuretted hydrogen; heat it to drive off any excess of the gas, and test the fluid with acidulated persulphate of iron. Evaporate the fluid separated by the filter to an extract, act upon this by alcohol, leave the tincture to spontaneous evaporation, and test the residue for morphine.

Treatment.—The stomach-pump should be instantly used, or an emetic consisting of gr. xxx. of sulphate of zinc, or from gr. v. to gr. x. of sulphate of copper dissolved in an ounce of water, should be exhibited as soon as possible, and the vomiting kept up by irritating the fauces. Should the patient be too narcotised to swallow, a dose of apomorphine may be given subcutaneously. It is advisable to use an astringent infusion instead of water with the stomach-pump. After the stomach is emptied, if the whole of the narcotic be removed, give large draughts of vinegar and water, and other acidulous fluids; with coffee, brandy, and cordials; keeping awake and constantly rousing the attention of the sufferer, until the effects of the poison subside. Immersion in the tepid bath is a useful means of subduing the drowsiness. Dashing cold water on the head and chest is also useful in rousing the sensibility. Atropine and nitrite of amyl have been recommended.

OXALIC ACID. (*Acidum Oxalicum*.) A corrosive poison.

Symptoms.—Burning pain of the stomach; nausea, and severe but ineffectual efforts to vomit; great dilatation of pupils; vertigo, convulsions, and death.

Morbid Appearances.—The tongue and fauces are covered with a viscid white mucus; the stomach is partially inflamed, and exhibits in some places, those to which the acid has been more immediately applied, a pulpy character. Evidences of inflammation in the lungs.

Test.—Its small, needle-form, lamellar crystals have occasioned it to be mistaken for Epsom salts; but it is easily distinguished from these by its strong acid taste, by its volatilising when heated in a phial, and subliming in small crystals, and by lime-water throwing down, in its solution, a copious precipitate of oxalate of calcium,

which is insoluble in an excess of the acid, but soluble in nitric acid. Precipitate by nitrate of silver: the precipitate, when well washed and dried, slightly detonates.

Treatment.—Administer, as soon as possible after the poison has been taken, a mixture of chalk and water, and then evacuate the oxalate of calcium thus formed, by exciting vomiting, by copious dilution and irritating the fauces.

OXIDE OF COPPER. See under *Verdigris*.

PHOSPHORUS. (*Phosphorus*.) A corrosive poison.

Symptoms.—Phosphorus taken even in moderate quantities produces immediate death; and as it has been exhibited as a remedy, in this manner it may prove poisonous. The symptoms are violent pain of the stomach, with a hot alliaceous taste in the mouth; great excitement of the arterial system, and horrible convulsions, which are the forerunners of death. Sometimes general improvement takes place for a day or more, and nervous symptoms then supervene and terminate the case. Occasionally the main symptoms are vomiting of blood, bloody diarrhoea, and hæmorrhagic extravasations on the skin.

Morbid Appearances.—A general inflammatory aspect of the stomach and intestines, with sphacelated spots in various parts.

Test.—Phosphorus is readily known by its alliaceous smell and combustible properties.

Treatment.—Dilute largely so as to fill the stomach with liquid, by which the irritative action of the phosphorus in it is impeded and vomiting induced, without increasing the irritation of the viscus. Magnesia, mixed with the fluid exhibited, is useful for neutralising phosphoric acid, which is formed in these cases.

POTASH, CAUSTIC, and SOLUTION OF POTASH.—SOLUTION OF POTASSA. (*Potassa Caustica*; *Liquor Potassæ*.) Corrosive mineral poisons.

Symptoms.—Acrid caustic taste in the mouth; great heat of the throat; nausea, and vomiting of bloody alkaline matter; acute epigastric pain and insupportable colic; hypercatharsis, convulsions, and death.

Morbid Appearances.—Evidences of the most extensive inflammation of the whole alimentary canal, and perforations of the stomach.

Test.—If any of the poison remain, it is known by feeling soapy to the touch, changing to green the vegetable reds, restoring reddened blues, and, precipitating nitrate of silver in the form of a dark-coloured oxide, which is soluble in nitric acid. Water impregnated with carbonic acid produces no precipitate nor causes opacity, which distinguishes it from the caustic earths. Caustic potash is distinguished from caustic soda by evaporating the solution in a silver spoon, and, when it is concentrated, testing with perchloride of platinum, or with tartaric acid; the former causes a yellow precipitate, the latter a precipitation of bitartrate of potash. If none of the poison remain, the vomited matter must be tested in the above manner.

Treatment.—Vinegar and the vegetable acids should be instantly and freely administered. Dilute with demulcents, and employ antiphlogistic means to reduce the inflammatory symptoms.

* * Cases of poisoning by caustic soda and the alkaline carbonates require the same treatment.

PRUSSIC ACID. (*Acidum Hydrocyanicum*.) A sedative poison.

Symptoms.—When the dose is large, death is the immediate result; but

if the dose do not exceed 10 to 20 minims, it is succeeded by stupor and weight in the head, nausea, faintness, and vertigo, with loss of sight; these symptoms are followed by difficulty of respiration, dilated pupils, a small vibrating pulse, and syncope, which terminate insensibly in death, if no curative means be employed.

Morbid Appearances.—No change of structure nor any trace of inflammatory action is evident; but a strong odour of the acid exhales from the stomach.

Tests.—The odour; but the only certain test is to add to the liquid a few drops of liquor potassæ, and afterwards a mixture of a solution of proto- and persulphate of iron. If prussic acid be present, a precipitate of a burnt brown colour will fall, which, on adding a little dilute hydrochloric acid, instantly changes to a bluish-green, and gradually deepens to a beautiful full blue. Sulphate of copper, added to a solution rendered slightly alkaline by liquor potassæ, gives a greenish-white precipitate. Solution of nitrate of silver gives a white clotted precipitate, soluble in boiling nitric acid. If only the contents of the stomach be obtained, add some sulphuric acid, distil from a vapour bath, and test the product as above.

Treatment.—Administer as quickly as possible chlorine water, in doses of fl.dr.ij. in fl.unc.j. of water; chlorine, also, largely diluted with air, may be inhaled. Administer hot brandy and water, or camphor mixture, combined with liquor ammoniæ, or the aromatic spirit of ammonia. Oil of turpentine, also, and the whole range of diffusible stimuli, will prove useful. The hydrated protoxide and peroxide of iron. The cold affusion should be immediately employed, and vomiting should be promoted. Artificial respiration.

RUE, and OIL OF RUE. (*Rutæ Graveolentis folia et Oleum Volatile.*)
Acro-narcotic vegetable poisons.

Symptoms.—Great dryness of the mouth and throat, accompanied with a sensation of heat and pain of the stomach and bowels; vomiting; uncontrollable motion of head and limbs, with muttering and symptoms of intoxication; contracted pupil, swollen tongue; copious salivation; slow and feeble pulse.

Morbid Appearances.—We know of no recorded instance of death in the human species from the administration of rue or its oil; but in dogs which have been killed by it the stomach affords evidences of considerable inflammation. It is generally taken for the purpose of inducing abortion.

Test.—None; but the odour of the oil, which resembles that of the plant, leads to its detection.

Treatment.—Emetics, and afterwards dilution with acidulous drinks and demulcents.

SABINE or SAVIN, and OIL OF SAVIN. (*Sabinæ folia et oleum.*)
An acro-narcotic vegetable poison.

Symptoms.—All those of high excitement, with very acute pain of the stomach and bowels, nausea, vomiting, hypercatharsis, and convulsions. Abortion in pregnant women.

Morbid Appearances.—Inflammation of the mucous membrane of the stomach and rectum; but the symptoms depend chiefly on the action which the poison exerts on the nervous system.

Test.—Watery solutions give a deep green with perchloride of iron. The microscope has detected the small glands on the leaf of the plant, among the contents of the stomach.

Treatment.—Evacuate the stomach by copious dilution with mucila

ginous fluids. Employ opium for the relief of pain, and stimulants to prevent collapse.

SAINT IGNATIUS' BEAN. (*Strychnos Sancti Ignatii*.) An acro-narcotic poison.

Symptoms.—See *Strychnine*.

Tests.—This seed is about the size of a small olive, convex on one side and angular on the other, and covered with a grey powder; the internal substance is horny, hard, brown, inodorous, and very bitter to the taste.

Treatment.—See *Strychnine*.

SOW BREAD. (*Cyclamen Europæum*.) An acrid vegetable poison.

Symptoms.—Violent tormina and purging; bloody stools, accompanied with cold sweats and convulsions frequently terminating in death.

Test.—None.

Morbid Appearances.—Inflammation of the mucous membrane of the stomach and bowels.

Treatment.—As for poisoning with savin.

SPURGE—EUPHORBIVM. (*Euphorbium Succus proprius, et fructus*.) Acrid vegetable poisons.

Symptoms.—A burning sensation in the mouth, throat, and stomach; vomiting, hypercatharsis, producing bloody stools, convulsions, and death.

Test.—The euphorbium of the shops is readily recognised by the irregular triangular form of its tears, and their enclosed seeds. When boiled in alcohol, the greater part is taken up, but an insipid wax separates as the solution cools, whilst a hot acrid oil remains in solution.

Morbid Appearances.—Evidences of violent inflammation of the stomach and the bowels, but more particularly of the rectum, which is always ulcerated, the surface of the abraded spots being covered with a brown or blackish fluid, which is probably extravasated blood.

Treatment.—Excite vomiting by large draughts of tepid water, and then exhibit, alternately and repeatedly, a few table-spoonfuls of olive oil, and a cupful of milk. Soothe the rectum with mutton broth and starch clysters, and suppositories of opium or morphine.

STRAMONIUM, or THORN APPLE. (*Daturæ Stramonii herba, fructus, et semina*.) A narcotic vegetable poison, deriving its power from an alkaloid, named *Daturine*.

Symptoms.—Vomiting, vertigo, dilatation of pupil, delirium, sometimes furious madness, stupor, convulsions, paralysis, cold sweats, and death.

Test.—None.

Morbid Appearances.—Evidences of inflammation in the mucous membrane of the stomach and the meninges of the brain. The lungs are generally gorged with very dark-coloured blood, and blotches of extravasated blood are seen in various parts of the alimentary canal.

Treatment.—The same as in cases of poisoning by opium.

STRYCHNINE. (An alkaloid obtained from *Nux Vomica*, the fruit of the *Strychnos Nux-vomica*.) An acro-narcotic vegetable poison.

Symptoms.—Hurried breathing, vertigo, trembling, quivering, twitching, and finally tetanic convulsion of all the muscles of the body; those of the extremities being first affected, afterwards those of the trunk and jaws (opisthotonos and trismus). Occasionally there is a slight remission of the symptoms, but on the slightest noise or touch

the paroxysms recur ; a shriek, as if from pain, follows, then violent palpitation, rapid succession of paroxysms, relaxation of convulsion, and quiet death. The symptoms are to be distinguished from those of epilepsy by the absence of unconsciousness, and from those of true tetanus by their quick accession, rapid course, and order of succession. In tetanus the symptoms occur gradually, and trismus is among the first, and the disease runs its course in a *few days*. In cases of poisoning by strychnine, trismus is not an *early* symptom, and death takes place within an *hour or two*.

Morbid Appearances.—Scarcely any evidences of membranous inflammation in the stomach or intestines ; the lungs appear natural ; the left ventricle of the heart is generally gorged with blood, and the whole of the arteries contracted, though in some cases the ventricle has been empty and contracted.

Tests.—Bichromate of potassium in powder ; peroxide of lead ; peroxide of manganese ; permanganate of potassium ; and red prussiate of potash in solution. Pure strychnine is white, soluble in boiling rectified spirit, melts, and is finally decomposed by heat, and is bitter to the taste. Previously to applying the foregoing tests, dissolve the strychnine in a drop of strong sulphuric acid. On the addition of any one of the above tests to this solution a brilliant play of colours results, passing from deep blue to purple and then to orange.

Treatment.—(See *Nux Vomica*.) Chloral hydrate and Calabar bean have been employed with advantage as antidotes.

SULPHATE OF COPPER. See under *Verdigris*.

SULPHATE OF ZINC. See *White Vitriol*.

SULPHURIC ACID. (*Acidum Sulphuricum*.) A corrosive mineral poison.

Symptoms.—Austere styptic taste in the mouth ; a sensation of burning pain in the throat, gullet, and stomach ; nausea, vomiting, and a horrible fœtor of the breath. The matter vomited is tinged both by arterial and by venous blood, and air-bubbles form upon the spot if it fall either upon chalk or upon marble. Symptoms of general inflammation of the abdominal viscera soon supervene, with difficult respiration, and a cough resembling croup ; a frequent, small, irregular pulse ; extreme anxiety and restlessness ; convulsions of the face and lips ; and sometimes a papulous eruption precedes death. The intellect remains entire until the last.

Morbid Appearances.—The stomach contains a large quantity of dark grumous matter, and is much distended with fœtid gas ; its coats are ulcerated, black, and covered with deep corroded spots, an appearance that extends almost through the whole of the alimentary canal, which in many places also is, as it were, dissolved, and in many instances perforations take place, and the contents of the stomach are found in the abdominal sac. The mouth and œsophagus present evidences of the highly corrosive properties of the poison.

Test.—If any of the poison remain, it can be readily recognised by its saponaceous feeling when rubbed between the fingers, its great specific gravity, its property of evolving heat when mixed with water, and by its decomposition and the evolution of sulphurous acid gas on boiling it over mercury. If it be combined with wine or with vinegar, add a solution of nitrate of barium, when a sulphate of barium, insoluble in nitric acid, will be formed. The contents of the stomach may be tested by boiling them with metallic mercury, which will produce sulphurous acid gas if sulphuric acid have been the poison.

Treatment.—Having ascertained the nature of the poison, dilute instantly and largely with milk mixed with calcined magnesia, or with soap, or the fixed alkalis; allay pain with morphine, and treat the secondary symptoms by the means usually employed in inflammation of the intestines.

TARTARIC ACID. (*Acidum Tartaricum.*) A corrosive poison.

Symptoms.—Nearly the same as those from poisoning by oxalic acid, but less severe.

Morbid Appearances.—Similar to those produced by oxalic acid.

Tests.—When heated in a phial, instead of subliming like oxalic acid, it is decomposed, blackens, swells, smokes, and exhales an acrid vapour. It burns with a blue flame, and leaves a spongy residue. When its solution is treated with lime-water, the white precipitate is soluble in an excess of the acid; with potash, the precipitated crystals are acid tartrate of potassium.

Treatment.—Solutions of the alkalis, or chalk and water, should be instantly administered, and the secondary symptoms treated by sedatives.

TARTAR EMETIC — POTASSIO-TARTRATE OF ANTIMONY. (*Antimonium Tartaratum, Antimonii Potassio-Tartras.*) A corrosive metallic poison.

Symptoms.—Nausea and severe vomiting, hiccough, cardialgia, a sensation of burning heat at the epigastrium; twisting colic and hypercatharsis; small, frequent, hard pulse; syncope, difficult respiration, vertigo, insensibility to external stimulants, most painful cramps in the lower limbs, great prostration of strength, and death.

Morbid Appearances.—The stomach and intestines much inflated with gas, and the mucous membrane of the stomach and intestines red, tumefied, and covered with a viscid layer easily separated; the peritoneum is generally of a dark brick-red hue; sometimes the membranes of the brain display marks of having been inflamed; occasionally the lungs are also inflamed.

Tests.—If the poison be found in its solid form, add charcoal and reduce it by heating it in a coated tube. The odour of burnt vegetable matter will be exhaled; the powder will first blacken, then resume its white colour, and finally display metallic antimony. If the poison be found in a state of solution, pass through the solution a stream of sulphuretted hydrogen gas; collect and wash the orange-coloured precipitate, put it in a glass tube open at both ends, and fitted to a proper apparatus for passing over the sulphide of antimony a stream of hydrogen gas, whilst the tube is heated by a spirit-lamp. The sulphide is thus reduced, the sulphur carried off, and metallic antimony procured. It may also be tested by Marsh's and Reinsch's methods. (See *Arsenic.*)

Treatment.—Lilute freely with tepid infusion of galls to decompose the poison and form an insoluble tannate, and evacuate by the stomach-pump or by apomorphine subcutaneously injected; but if the whole of the poison be not evacuated, large doses of the decoction or tincture of cinchona bark should be administered. Strong tea or other liquids containing tannin should be employed if cinchona preparations are not at hand. It would perhaps be well to give these in the first instance, in doses sufficient to excite vomiting by their bulk. Later treatment should consist of stimulants and morphine.

TOBACCO. (*Nicotianæ Tabaci folia.*) A narcotic vegetable poison, deriving its power from an alkaloid *Nicotina*, and a volatile oil.

Symptoms.—Severe nausea, vomiting, headache, and other sensations of inebriety; sudden sinking of the strength, cold sweats, tremors, convulsions, and death. It operates very powerfully when introduced into the anus; the external application of a strong infusion is attended with similar symptoms, and proves nearly as virulent.

Morbid Appearances.—The mucous membrane of the stomach presents very slight evidences of inflammation; but no alteration is perceptible in the intestines. The lungs are generally found gorged with blood; but the morbid appearances are altogether obscure; the poison producing its deleterious effects evidently by its action both on the heart, which it paralyzes, and on the nervous system.

Tests.—Nicotine gives precipitates with solution of iodine in iodide of potassium, and with tannic acid. Corrosive sublimate and bichloride of platinum also yield well-marked precipitates.

Treatment.—If the practitioner be called immediately after the poison has been swallowed, evacuate the stomach by two or three grains of tartar emetic, assist its action by irritating the fauces, and encourage the vomiting by very copious draughts of astringent infusions. If, however, some time have elapsed, administer castor oil and purgatives. Afterwards rouse with brandy, camphor, and other stimulants.

VERATRUM. See *Hellebore Root*—White.

VERATRINE. An acro-narcotic poison.

Symptoms.—In even small doses it excites nausea, vomiting, purging, embarrassed respiration, tetanic spasms, which generally terminate in death.

Morbid Appearances.—Indication of severe inflammation of the mucous membrane, ulcerations of the stomach and duodenum.

Tests.—A white, inodorous, uncrystallisable powder, which excites violent sneezing when applied to the nostrils; it is scarcely soluble in water, very soluble in alcohol and ether; sulphuric acid first colours it yellow, then red.

Treatment.—Copious dilution with demulcents; emetics, diffusible stimulants and opium; maintain recumbent posture.

VERDIGRIS. (*Ærugo, Cupri Subacetat.*) A corrosive metallic poison.

Symptoms.—Dry, parched tongue, accompanied with a sensation of strangulation in the throat; nausea, and constant spitting, with copious eructations; vomiting, or fruitless effort to vomit, with a feeling of dragging at the stomach; dreadful colic, and tenesmus; black and, occasionally, bloody stools; the pulse small, hard, quick, and irregular; ardent thirst, difficult respiration, præcordial anxiety, cold sweats, vertigo, great prostration of strength, cramps, convulsions, and death. The more prominent and most frequent symptoms are the spitting, colic, and vomiting.

Morbid Appearances.—Stomach inflamed, and its coats much thickened, so as almost to obliterate the pyloric orifice, and tinged green; intestines inflamed, and in many places gangrenous, and even pierced so as to allow the poison to escape into the abdominal cavity. The rectum is generally found ulcerated.

Tests.—It is readily recognised when any of the poison remains unswallowed. If in solution in wine or any coloured fluid, discharge the colour by chlorine, and precipitate the filtered fluid by ferrocyanide of potassium, which throws down a chestnut-brown precipitate if any salt of copper be present; or decompose the verdigris

in the solution by placing in it a clean knife, or a stick of phosphorus, which will appear after some minutes coated with metallic copper.

Treatment.—Administer large doses of syrup, or copious draughts of sugar, albumen ovi, and water, until the stomach is evacuated by the bulk of the liquid; and, afterwards, continue the use of albumen in more moderate doses. Later symptoms must be treated as they arise.

VIPER POISON.

Symptoms.—Lancinating pain in the bitten part, increased on pressure, and extending to the whole limb; the part swells, is at first pale, then red, livid, gangrenous, and excessively hard. Vomiting, convulsions, jaundice; pulse small, frequent, tense, irregular; embarrassed breathing, cold sweats, delirium

Treatment.—Apply a ligature above the wounded part, cauterise the wound with a hot iron, or any active caustic; administer ammonia, olive oil.

WHITE LEAD. See under *Carbonate of Lead*.

WHITE VITRIOL. (*Sulphas Zinci*.) A corrosive metallic poison.

Symptoms.—A metallic taste in the mouth, with a sensation of choking; nausea and severe vomiting, frequent stools, pains of the epigastrium, difficult respiration, quickened pulse, paleness and shrinking of the features, and coldness of the extremities. Death but rarely follows, owing to the vomiting excited in the first instance by the poison.

Morbid Appearances.—Evidence of intense inflammation of the mucous membrane of the stomach and bowels, and occasionally patches of black extravasated blood on the muscular coats of these viscera.

Test.—Chromate of potassium, which throws down in the solution an orange-yellow chromate of zinc.

Treatment.—Carbonate of potassium or of sodium dissolved in warm water. Let the patient drink milk freely, which, besides acting as an emollient, partially decomposes the poison, rendering it more inert. Solutions containing tannin are useful. Pain should be relieved by hypodermic injections of morphine, and by poultices. Exhibit emollient clysters, if the poison be not ejected from the stomach, and have passed the pylorus; and treat the secondary symptoms as they arise.

APPENDIX.

No. III.

ART OF PRESCRIBING MEDICINES.

In prescribing a medicine, the following circumstances should always be kept in view :—AGE, SEX, TEMPERAMENT, HABITS, CLIMATE, the CONDITION OF THE STOMACH, and IDIOSYNCRASY.

AGE.

For an Adult, suppose the dose to be one or	60	grains.
Under 1 year, will require only 1-12th	5	grains.
2 1-8th	7½	grains.
3 1-6th	10	grains.
4 1-4th	15	grains.
7 1-3rd	20	grains.
14 half	30	grains.
20 2-3rds	40	grains.
Above 21 The full dose..... one	60	grains.
65 The inverse gradation of the above.		

Opiates affect children more powerfully than adults ; but children bear relatively larger doses of calomel than adults.

SEX.—Women require smaller doses than men ; they are more rapidly affected by purgatives than men ; and the condition of the uterine system must never be overlooked.

TEMPERAMENT.—Stimulants and purgatives more readily affect the sanguine than the phlegmatic ; and consequently the former require smaller doses. They require also more caution in the quantity of blood to be abstracted, in the event of bleeding being deemed necessary.

HABITS.—The knowledge of habits is essential ; for persons in the habitual use of stimulants and narcotics require larger doses to affect them when labouring under disease, whilst those who have habituated themselves to the use of saline purgatives are more easily affected by these remedies. Persons, however, who have habituated themselves to the use of opium do not require larger doses than usual of other narcotics.

CLIMATE.—Medicines act differently on the same individual in summer and in winter, and in different climates. Narcotics act more powerfully in hot than in cold climates ; hence smaller doses are required in the former ; but the reverse is the case with respect to calomel.

CONDITION OF THE STOMACH, AND IDIOSYNCRASY.—The least active remedies operate very violently on some individuals, owing to a peculiarity of stomach, or rather habit of body, unconnected with temperament. This state can be discovered only by accident or time ; but when it is known, it should always be attended to by the practitioner.

In prescribing, the practitioner should always so regulate the intervals between the doses, that the next dose may be taken before the effect

produced by the first is altogether effaced ; for, by not attending to this circumstance, the cure is always commencing, but never proceeding. It should, however, also be kept in mind, that some medicines, such as the mercurial salts, arsenic, digitalis, &c., are apt to accumulate in the system ; and danger may thence arise if the doses too rapidly succeed one another. The action also of some remedies, elaterium and digitalis for example, continues long after the remedy is left off ; and therefore much caution is requisite in avoiding too powerful an effect, by a repetition of them even in diminished doses. Aloes and castor oil acquire greater activity by continued use, so that the dose requires to be diminished.

CLASSIFICATION OF REMEDIES.

1. **ALTERATIVES** are remedies which tend to improve the general health, without necessarily producing any visible effect on the secretions or excretions of the body. They are sometimes called *Special Stimulants*, and include *Specifics* as well as those medicines usually termed *Alteratives*.
2. **ANTACIDS** are remedies prescribed to neutralise the excess of acid in the stomach or urine.
3. **ANTHELMINTICS** destroy and dispel intestinal worms.
4. **ANTIPERIODICS** remove the diseases that occur at stated periods, as ague, and the several forms of neuralgia.
5. **ANTIPYRETICS** reduce the temperature in fever.
6. **ANTISCORBUTICS** prevent or cure scurvy.
7. **ANTISEPTICS** prevent or retard decomposition and putrefaction.
8. **ANTISPASMODICS** counteract irregular and inordinate muscular action.
9. **ASTRINGENTS** check bleeding or excessive secretions, or contract relaxed organs.
10. **CARMINATIVES** relieve griping.
11. **CAUSTICS** and **COUNTER-IRRITANTS** destroy or burn the animal tissues, and, when locally applied, excite heat, redness, and inflammation.
12. **DEMULCENTS** allay irritation by their local soothing properties.
13. **DISINFECTANTS** destroy the specific contagia of disease, decomposing them.
14. **DIAPHORETICS** cause and encourage cutaneous exhalation.
15. **DIURETICS** augment the secretion and promote the discharge of urine.
16. **EMETICS** induce vomiting.
17. **EMMENAGOGUES** promote the flow of the catamenia.
18. **EXPECTORANTS** promote the secretion from the bronchial tubes and air passages, and facilitate the discharge.
19. **NARCOTICS**, **ANODYNES**, **HYPNOTICS**, and **SEDATIVES** promote sleep, allay pain or irritability, and (in the instance of the last) reduce the action of the heart.
20. **PURGATIVES** quicken intestinal action and increase the alvine evacuations.
21. **REFRIGERANTS** are cooling remedies, which abate thirst or unnatural heat.
22. **SIALAGOGUES** promote the flow of saliva.
23. **STIMULANTS** temporarily increase the frequency of the pulse and the heat of the body.
24. **TONICS** increase the tone and vigour of the body.

Examples of some useful Forms of Extemporaneous Prescriptions. (The doses are for Adults.)

DRAUGHTS.

ANTACID.

R Magnesii carbonatis gr.xv.
Spiritus ammonii aromatici fl.dr.ss.
Tincturæ camphoræ comp. min.xv.
Aquæ anethi fl.unc.j.

Fiat haustus, pro re nata sumendus.

R Spiritus chloroformi min.xv.
Tincturæ nucis vomicæ min.x.
Ammonii carbonatis gr.v.
Infusi cascarillæ fl.unc.j.

Fiat haustus, ter in die sumendus.

ANTISPASMODIC.

R Tincturæ valerianæ ammon. min.xx.
Tincturæ hyoscyami min. xxx.
Aquæ camphoræ fl.unc.j.

Fiat haustus, quarta quaque hora sumendus.

R Pulveris rhei gr.v.
———— zingiberis gr.v.
Sodii bicarbonatis gr.x.
Spiritus ammoniæ aromat. min.xx.
Aquæ cinnamomi fl.unc.j.

Fiat haustus, urgente flatu sumendus.

ASTRINGENT.

R Tincturæ opii min.x.
———— catechu fl.dr.ss.
Misturæ cretæ fl.unc.j.

Fiat haustus, quarta quaque hora vel post dejectiones singulas liquidas sumendus.

CATHARTIC.

R Potassii nitratis gr.x.
———— bicarbonatis gr.xx.
Sodæ tartaratæ dr.j.
Aquæ menthæ piperitæ fl.unc.j.

Fiat haustus, quamprimum vel primo mane sumendus.

R Magnesii sulphatis dr.ss.
———— carbonatis gr.xv.
Aquæ menthæ piperitæ fl.unc.j.

Fiat haustus, quarta quaque hora sumendus.

R Magnesii carbonatis gr.v.
———— sulphatis gr.xx.
Pulveris rhei gr.xx.
Aquæ menthæ piperitæ fl.unc.j.

Fiat haustus, mane sumendus.

- R Magnesii sulphatis dr.ij.
 Tincturæ sennæ fl.dr.ij.
 Spiritus ammoniæ aromatici min.xx.
 Infusi sennæ fl.unc.jss.

Fiat haustus, primo mane sumendus.

- R Pulveris rhei gr.x.
 Sodii bicarbonatis gr.xv.
 Tincturæ zingiberis min.x.
 Liquoris ammoniæ fortioris min.ij.
 Aquæ menthæ piperitæ fl.unc.j.

Fiat haustus, mane sumendus.

DIAPHORETIC.

- R Antimonii tartarati gr. $\frac{1}{2}$.
 Liquoris ammonii acetatis fl.dr.ij.
 Aquæ fl.unc.j.

Fiat haustus, quarta vel sexta quaque hora sumendus.

- R Liquoris ammonii acetatis fortioris min.xl.
 Ammonii carbonatis gr.iv.
 Spiritus ætheris nitrosi min.xx.
 Aquæ fl.unc.j.

Fiat haustus, sexta quaque hora sumendus.

DIURETIC.

- R Tincturæ scillæ min.xv.
 Spiritus ætheris nitrosi fl.dr.ss.
 Liquoris ammonii acetatis fl.dr.ij.
 Aquæ carui fl.unc.j.

Fiat haustus, ter in die sumendus.

- R Potassii tartratis acidæ dr.ss.
 Spiritus ætheris nitrosi fl.dr.ss.
 Decocti scoparii fl.unc.j.

Fiat haustus, ter in die sumendus.

EMETIC.

- R Pulveris ipecacuanhæ gr.x.
 Zinci sulphatis gr.xx.
 Aquæ menthæ viridis fl.unc.j.

Fiat haustus emeticus, quamprimum vel vespere sumendus.

- R Zinci sulphatis gr.xxx.
 Aquæ fl.unc.j.

Fiat haustus emeticus, statim sumendus.

- R Zinci sulphatis gr.xx.
 Vini ipecacuanhæ fl.unc.ss.
 Aquæ fl.unc.jss.

Fiat haustus emeticus, statim sumendus.

NARCOTIC.

- R Tincturæ opii min.xv.
 Ætheris min.xv.
 Aquæ camphoræ fl.unc.j.

Fiat haustus, hora somni sumendus.

- R Tincturæ opii min.x.
Spiritus chloroformi min.x.
Aquæ menthæ piperitæ fl.unc.j.

Fiat haustus, ter die sumendus.

- R Potassii bromidi gr.xxx.
Spiritus ammoniæ aromat. min.xx.
Aquæ fl.unc.j.

Fiat haustus, ter die sumendus.

REFRIGERANT.

- R Potassii nitratis gr.x.
Spiritus ætheris nitrosi fl.dr.ss.
Liquoris ammonii acetatis fl.dr.ij.
Aquæ fl.unc.ij.

Fiat haustus, quarta quaque hora sumendus.

SEDATIVE.

- R Sodii bicarbonatis gr.x.
Magnesii carbonatis gr.x.
Acidi hydrocyanici dil. min.iiij.
Spiritus chloroformi min.x.
Tincturæ cardamomi comp. min.xx.
Aquæ fl.unc.j.

Fiat haustus, bis terve quotidie sumendus.

- R Acidi hydrobromici min.xx.
Syrupi min. xx.
Aquæ fl.unc.j.

Fiat haustus, ter quotidie sumendus.

TONIC.

- R Acidi nitro-hydrochlorici dil. min.x.
Spiritus chloroformi min.v.
Decocti cinchonæ fl.unc.j.

Fiat haustus, bis terve quotidie sumendus.

- R Quininæ sulphatis gr. ij.
Acidi sulphurici dil. min.v.
Tincturæ aurantii fl.dr.j.
Aquæ fl.unc.j.

Fiat haustus, bis terve quotidie sumendus.

- R Quininæ sulphatis gr.j.
Acidi sulphurici dil. min.jss.
Potassii iodidi gr.v.
Aquæ fl.unc.j.

Fiat haustus, bis quotidie sumendus.

- R Ferri et ammonii citratis gr.viiij.
Ammonii carbonatis gr.ij.
Spiritus chloroformi min.ij.
Infusi quassiæ fl.unc.j.

Fiat haustus, bis terve quotidie sumendus.

- R Ferri sulphatis gr.ij.
Magnesii sulphatis gr.xx.
Acidi sulphurici diluti min.x.
Aquæ menthæ piperitæ fl.unc.j.

Fiat haustus, bis quotidie sumendus.

- R Liquoris ferri perchloridi min.x.
 Tincturæ nucis vomicæ min.vj.
 Acidi phosphorici diluti min.v.
 Spiritus chloroformi min.v.
 Aquæ fl.unc.j.

Fiat haustus, bis terve quotidie sumendus.

- R Tincturæ camphoræ comp. min.xx.
 Spiritus chloroformi min.x.
 Syrupi scillæ fl.dr.ss.
 Infusi cascarillæ fl.unc.j.

Fiat haustus, quarta quaque hora sumendus.

MIXTURES.

ASTRINGENT.

- R Tincturæ catechu fl.dr.vj.
 Potassii bicarbonatis dr.j.
 Tincturæ opii fl.dr.j.
 Aquæ cinnamomi fl.unc.j.

Fiat mistura, cujus sumantur cochlearia tria magna post singulas dejectiones liquidas.

- R Misturæ cretæ fl.unc.ijj.
 Tincturæ catechu fl.dr.ijj.
 Decocti hæmatoxyli fl.unc.ijj.

Fiat mistura, cujus sumantur cochlearia duo magna quartis horis, si opus sit.

CATHARTIC.

- R Pulveris rhei gr.xlv.
 Magnesii carbonatis dr.jss.
 Tincturæ zingiberis fl.dr.ijj.
 Aquæ menthæ piperitæ fl.unc.vj.

Fiat mistura, cujus capiat cochlearia duo magna omni bihorio donec alvus purgetur.

- R Magnesii sulphatis dr.vj.
 Acidi sulphurici diluti min.xxiv.
 Quininæ sulphatis gr.vj.
 Syrupi zingiberis fl.dr.vj.
 Aquæ anethi fl.unc.vj.

Fiat mistura. Sumantur cochlearia duo magna ter quotidie.

EXPECTORANT.

- R Vini ipecacuanhæ fl.dr.ij.
 Tincturæ scillæ fl.dr.iv.
 Spiritus ætheris nitrosi fl.dr.vj.
 Aquæ chloroformi fl.unc.ijj.
 Aquæ ad fl.unc.xii.

Fiat mistura. Sumat cochleare magnum urgente tussi.

- R Vini ipecacuanhæ fl.dr.ss.
 Vini antimonialis fl.dr.ss.
 Spiritus chloroformi fl.dr.ss.
 Tincturæ belladonnæ min.xv.
 Syrupi scillæ fl.dr.ijj.
 Liquoris ammonii acetatis ad fl.unc.j.

Misce. Cochleare medicum urgente tussi sumendum.

TONIC.

- R Liquoris ferri perchloridi fl.dr.jss.
 Acidi nitro-hydrochlorici dil. fl.dr.j.
 Aquæ fl.unc.vj.

Fiat mistura, cujus cochlearia duo majora quarta quaque hora sumantur.

- R Ferri sulphatis gr.xxiv.
 Quinina sulphatis gr.xxiv.
 Acidi sulphurici diluti fl.dr.ij.
 Aquæ chloroformi fl.unc.xij.

Fiat mistura, cujus cochlearia magna duo ter quotidie sumantur.

DETERGENT GARGLE.

- R Potassii chloratis dr.jss.
 Acidi hydrochlorici min.xl.
 Glycerini fl.unc.j.
 Aquæ fl.unc.xix.

Fiat gargarisma, sæpe utendum.

ASTRINGENT GARGLE.

- R Acidi tannici dr.j.
 Aluminis dr.ij.
 Glycerini fl.unc.j.
 Aquæ fl.unc.xix.

Sit gargarisma, sæpe utendum.

- R Glycerini acidi tannici fl.dr.ijj.
 Acidi hydrochlorici diluti fl.dr.ij.
 Aquæ fl.unc.xx.

Fiat gargarisma, sæpe utendum.

- R Acidi tannici dr.vj.
 Acidi gallici dr.ij.
 Aquæ fl.unc.j.

Fiat gargarisma, sæpe utendum guttatim.

STIMULANT GARGLE.

- R Tincturæ capsici fl.dr.ijj.
 Acidi nitrici diluti fl.dr.ijj.
 Aquæ fl.unc.xij.

Fiat gargarisma, subinde utendum.

PILLS.

ALTERATIVE.

- R Extracti colocynthidis comp. gr.xxiv.
 Extracti hyoscyami gr.xxiv.
 Pilulæ hydrargyri gr.xxiv.
 Pulveris ipecacuanhæ gr.vj.

Misce, et divide in pilulas viginti quatuor, quarum sumatur una ter quotidie.

ANTISPASMODIC.

R̄ Zinci valerianatis
Extracti gentianæ āā gr. ℥xiij.

Fiant pilulæ triginta sex. Sumantur duo quarta vel sexta quaque hora.

R̄ Ferri sulphatis exsiccatae gr.xv.
Strychninæ gr.j.
Extracti rhei gr.xl.
Quininæ valerianatis gr.xv.

Fiat massa, in pilulas æquales triginta dividenda, quarum capiat unam ter quotidie.

ANTISYPHILITIC.

R̄ Hydrargyri cum creta gr.xxx.
Pulveris ipecacuanhæ comp. gr.xxx.
Theriacæ q.s.

Divide in pilulas æquales duodecim. Sumatur una mane nocteque quotidie.

R̄ Hydrargyri cum creta gr.xc.
Quininæ sulphatis gr.xxx.
Theriacæ q.s.

Fiant pilulæ æquales triginta. Sumatur una ter quotidie.

R̄ Hydrargyri subchloridi gr.xx.
Opī gr.v.
Theriacæ q.s.

Fiant pilulæ viginti. Sumatur una mane nocteque quotidie.

APERIENT.

R̄ Aloes barbadensis
Scammonii
Pulveris jalapæ
—— zingiberis sing.gr.vj.
Theriacæ q.s.

Fiant pilulæ sex. Sumatur una hora somni quotidie.

R̄ Aloes barbadensis dr.iiij.
Pulveris jalapæ dr.iiij.
—— colocynthidis dr.j.
—— cambogiæ gr.x.
Saponis mollis gr.xl.
Pulveris zingiberis gr.v.
Olei olivæ min.x.
Olei caryophylli min.v.
Theriacæ q.s.

Ut fiat massa, in pilulas centum dividenda, quarum sumat unam vel duas hora somni quotidie.

R̄ Hydrargyri subchloridi gr.vj.
Pilulæ colocynthidis comp. gr.xxiv.
Olei carui q.s.

Fiant pilulæ sex. Sumatur una hora somni quotidie.

R̄ Hydrargyri subchloridi gr.x.
Pulveris jalapæ gr.xxx.
Theriacæ q.s.

Ut fiat massa, in pilulas decem dividenda. Sumatur una hora somni quotidie.

R̄ Hydrargyri subchloridi gr.x.

Pilulæ rhei comp. gr.xx.

Extracti hyoscyami gr.x.

Ut fiat massa, in pilulas decem dividenda. Sumatur una hora somni quotidie.

R̄ Pulveris ipecacuanhæ gr.vj.

Pilulæ rhei comp. gr.xxiv.

Fiant pilulæ sex, quarum sumat unam mane quotidie.

ASTRINGENT.

R̄ Acidi gallici gr.xlvij.

Extracti opii gr.iiij.

Confectionis rosæ q.s.

Ut fiant pilulæ duodecim. Sumatur una quarta vel sexta quaque hora.

R̄ Acidi tannici gr.xlvij.

Pulveris opii gr.iiij.

Mucilaginis tragacanthæ q.s.

Ut fiant pilulæ duodecim. Sumatur una quarta vel sexta quaque hora.

R̄ Cupri sulphatis gr.xviiij.

Extracti opii gr.ix.

Pulveris glycyrrhizæ gr.lxxij.

Confectionis rosæ caninæ q.s.

Ut fiant pilulæ triginta sex, quarum sumat unam bis terve quotidie.

DIAPHORETIC.

R̄ Antimonii tartarati gr.v.

Opium gr.x.

Theriace q.s.

Misce, et fiant pilulæ viginti, quarum sumatur una bis terve quotidie.

DIURETIC.

R̄ Pilulæ hydrargyri gr.xx.

Pulveris scillæ gr.xx.

———— digitalis gr.xx.

Extracti hyoscyami gr.xl.

Fiant pilulæ viginti. Sumatur una octava quaque hora.

R̄ Pilulæ hydrargyri gr.xij.

Pulveris digitalis gr.xij.

———— scillæ gr.xxiv.

Fiant pilulæ duodecim. Sumatur una octava quaque hora.

R̄ Pilulæ hydrargyri gr.xx.

Pilulæ scillæ comp. gr.xl.

Extracti hyoscyami gr.xl.

Fiant pilulæ viginti, quarum dosis sit una ter die sumenda.

EXPECTORANT.

R̄ Pilulæ scillæ comp. gr.liv.

Pulveris ipecacuanhæ gr.vj.

Contunde simul, et divide massam in pilulas æquales duodecim, quarum sumat unam sexta quaque hora.

NARCOTIC.

R Opii gr.j.

Fiat pilula, hora somni sumenda.

R Morphinae hydrochloratis gr. $\frac{1}{4}$ —gr.j.

Pulveris glycyrrhizæ rad. gr.ij.

Theriaca q.s.

Misce, et fiat pilula, hora somni sumenda.

R Pulveris ipecacuanhæ gr.ss.

Opii gr.ss.

Confect. rosæ caninae gr.ij.

Misce, et fiat pilula, hora somni sumenda.

R Pulveris ipecacuanhæ gr.ss.

Pilulae scillæ comp. gr.j.

Pulveris ipecacuanhæ comp. gr.ij.

Extracti aloes gr. $\frac{1}{4}$.

Misce, et fiat pilula, hora somni sumenda.

R Pulveris ipecacuanhæ comp. gr.ij.

————— scillæ gr.ss.

Extracti conii gr.jss.

Misce, et fiat pilula, hora somni sumenda.

R Pulveris ipecacuanhæ comp. gr.ij.

Pilulae hydrargyri gr.ij.

Misce, et fiat pilula, hora somni sumenda.

SEDATIVE.

R Plumbi acetatis gr.xxiv.

Opii gr.ij.

Pulveris glycyrrhizæ gr.xxiv.

Theriaca q.s.

Fiant pilulae æquales duodecim, quarum sumat unam sextam quaque hora.

R Extracti aconiti gr.ij.

————— belladonnae gr.ij.

Sacchari lactis gr.xxiv.

Theriaca q.s.

Fiant pilulae æquales duodecim. Sumatur una sexta quaque hora.

R Pulveris scillæ gr.ij.

Morphinae hydrochloratis gr. $\frac{1}{4}$.

Pulveris ipecacuanhæ gr.ss.

Olei anisi min. $\frac{1}{4}$.

Misce, et fiat pilula, ter die sumenda.

STIMULANT.

R Zinci sulphatis gr.iv.

Pilulae asafœtidæ comp. gr.xvj.

Fiant pilulae æquales quatuor. Sumatur una sexta quaque hora.

R Ferri sulphatis exsiccatae gr. xij.

Asafœtidæ gr.xxiv.

Extracti gentianæ gr.xij.

Fiant pilulae æquales duodecim. Sumatur una sexta quaque hora.

TONIC.

- ℞ Ferri redacti gr.lxxij.
 Quininæ sulphatis gr.xxiv.
 Pulveris glycyrrhizæ gr.xxiv.
 Balsami tolutani q.s.

Distribue in pilulas æquales viginti quatuor. Sumatur una bis quotidie.

- ℞ Quininæ sulphatis gr.xxiv.
 Ferri sulphatis exsiccatae gr.xij.
 Extracti gentianæ gr.lxxij.

Fiat massa, in pilulas xxiv. æquales dividenda, quarum sumat unam ter quotidie.

- ℞ Acidi arseniosi gr.ij.
 Piperis gr.xij.
 Extracti gentianæ gr.xlviii.

Fiat massa, in pilulas xxiv. æquales dividenda, quarum sumat unam ter quotidie.

TONIC AND PURGATIVE COMBINED.

- ℞ Extracti aloes gr.xv.
 Ferri sulphatis exsiccatae gr.xlv.
 Extracti gentianæ dr.j.

Contundantur simul, et dividatur moles in pilulas triginta, quarum sumatur una ter quotidie.

- ℞ Extracti aloes gr.xxx.
 ——— nucis vomicæ gr.x.
 ——— belladonnæ gr.vj.
 Pulveris glycyrrhizæ gr.xl.
 Glycerini tragacanthæ q.s.

Misce, et fiant pilulæ xx., quarum dosis sit j. ter die sumenda.

POWDERS.

ALTERATIVE.

- ℞ Hydrargyri cum creta gr.ij.
 Sacchari purificati gr.viiij.

Fiat pulvis, octava quaque hora sumendus.

CATHARTIC.

- ℞ Hydrargyri subchloridi gr.ij.
 Pulveris jalapæ gr.viiij.
 ——— cinnamomi comp. gr.ij.

Fiat pulvis, hora somni, pro re nata, sumendus.

- ℞ Hydrargyri cum creta gr.iiij.
 Pulveris jalapæ comp. gr.vj.

Sit pulvis, vespere vel primo mane sumendus.

- ℞ Hydrargyri subchloridi gr.ij.
 Pulveris scammonii comp. gr.iv.
 Sacchari purificati gr.ij.

Sit pulvis quamprimum sumendus.

DIAPHORETIC.

R Pulveris ipecacuanhæ comp. gr.v.

Bismuthi subnitratidis gr.xv.

Sit pulvis, quarta vel sexta quaque hora sumendus.

DIURETIC.

R Potassii tartratis acidæ gr.xxv.

Pulveris jalapæ gr.xx.

Zingiberis gr.iiij.

Sit pulvis, octava quaque hora sumendus.

EMETIC.

R Pulveris ipecacuanhæ gr.xv.

Antimonii tartarati gr.j.

Fiat pulvis emeticus.

TONIC.

R Pulveris cinchonæ rubræ gr.xv.

Sodii bicarbonatis gr.ix.

Pulveris cinnamomi comp. gr.iiij.

Fiat pulvis, tertia quaque hora sumendus.

R Ferri carbonatis sacch. gr.x.

Sodii bicarbonatis gr.x.

Zingiberis gr.v.

Fiat pulvis, quarta quaque hora sumendus.

EXTERNAL APPLICATIONS

LOTIONS.

R Ammonii chloridi dr.ij.

Acidi acetici diluti fl.unc.ss.

Spiritus rectificati fl.unc.ss.

Aquæ fl.unc.vij.

Misce, ut fiat lotio.

R Acidi nitrici diluti fl.dr.ss.

Tincturæ opii fl.dr.ss.

Aquæ fl.unc.vj.

Misce, ut fiat lotio, parti dolenti applicanda.

STIMULANT EMBROCATION.

R Liquoris ammoniæ fl.dr.j.

Olei olivæ fl.dr.vij.

Fiat embrocatio, cum panno laneo faucibus externis applicanda.

STIMULANT AND ANODYNE EMBROCATION.

R Linimenti camphoræ comp. fl.dr.xivss.

Tincturæ opii fl.dr.ij.

Tincturæ cantharidis fl.dr.iiijss.

Fiat linimentum, parti dolenti applicandum.

POWDERS.

R Zinci oxidi unc.j.

Amyli unc.ij.

Misce diligenter, ut fiat pulvis.

R Zinci oxidi unc.ss.

Calaminæ præparatæ unc.ss.

Tere, ut fiat pulvis.

OINTMENTS.

R Unguenti hydrargyri oxidi rubri dr.ij.

Adipis præparati dr.vj.

Tere diligenter in mortario donec bene misceantur.

R Zinci oleati dr.ij.

Adipis præparati unc.j.

Misce, ut fiat unguentum.

R Unguenti zinci unc.j.

Unguenti hydrargyri nitratis unc.j.

Unguenti plumbi acetatis unc.j.

Tere, ut fiat unguentum.

Examples of this nature might be extended indefinitely, but as the requirements of each case ought to determine the form of medicine to be prescribed, the practitioner will do well not to depend too much on particular formulæ. The formulæ here given are, in most instances, those commonly employed in various London Hospitals.

APPENDIX.

No. IV.

Quantity of certain important Drugs contained in different Pharmacopœial Preparations.

Acidum Arseniosum.

Liquor Arsenicalis	gr.j.	in fl.gr.c.
Liquor Arsenici Hydrochloricus	gr.j.	in fl.gr.c.
Liquor Sodii Arseniatis	{ gr.j. arseniate of so- dium }	in fl.gr.c.

Acidum Tannicum.

Glycerinum Acidi Tannici	unc.j.	in unc.vj.
Suppositoria Acidi Tannici	gr.iiij.	in each.
Trochisci Acidi Tannici	gr.ss.	in each.

Aconiti Radix.

Linimentum Aconiti	unc.j.	in fl.unc.jss.
Tinctura Aconiti	gr.livss.	in fl.unc.j.

Aconitina.

Unguentum Aconitinæ	gr.viiij.	in unc.j.
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Antimonium.

Pilula Hydrargyri Subchloridi	{ gr.j. of Sulphurated Antimony }	in gr.v.
Comp.	{ gr.j. of the oxide }	in gr.iiij.
Pulvis Antimonialis	{ gr.j. of Tartarated Antimony }	in gr.v.
Unguentum Antimonii Tartarati	gr.ij	in fl.unc.j.
Vinum Antimoniale	gr.ij	in fl.unc.j.

Atropina.

Unguentum Atropinæ	gr.viiij.	in unc.j.
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Atropinæ Sulphas.

Liquor Atropinæ Sulphatis	gr.j.	in fl.gr.c.
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Cannabis Indica.

Tinctura Cannabis Indicæ	gr.xxij. (extract)	in fl.unc.j.
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Cantharis.

Acetum Cantharidis	unc.ij.	in Oj.
Emplastrum Calefaciens	j.part.	in xxiv. part.
Cantharidis	j.part.	in iij. part.
Liquor Epispasticus	unc.j.	in fl.unc.iv.
Tinctura Cantharidis	gr.vss.	in fl.unc.j.
Unguentum Cantharidis	unc.j.	in unc.viiij.

Ch'oral Hydras.

Syrupus Chloral	gr.x.	in fl.dr.j.
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Chloroformum.

Aqua Chloroformi	min.j.	in min.cc.
Linimentum Chloroformi	fl.unc.j.	in fl.unc.ij.
Spiritus Chloroformi	min.j.	in min.xx.
Tinctura Chloroformi	min.j.	in min.x.
et Morphinæ	min.j.	in min.viiij.

Digitalis.

Infusum Digitalis . . .	gr.ijj. . . .	in fl.unc.j.
Tinctura Digitalis . . .	gr.livss. . . .	in fl.unc.j.

Hydrargyrum.

Emplastrum Ammoniaci cum Hydrargyro . . .	gr.j. . . .	in gr.v.
Emplastrum Hydrargyri . . .	gr.j. . . .	in gr.ijj.
Hydrargyrum cum Creta . . .	gr.j. . . .	in gr.ijj.
Linimentum Hydrargyri . . .	gr.j. . . .	in gr.vj.
Liquor Arsenii et Hydrargyri . . .	gr.j. (Arsen. et Hydr. Iod.) . . .	in fl.gr.c.
Iodidi . . .	gr. $\frac{1}{2}$ (perchloride) . . .	in fl.unc.j.
Liquor Hydrargyri Perchloridi . . .	gr.xviii. . . .	in fl.unc.x.
Lotio Hydrargyri Flava . . .	gr.ijj. (subchloride) . . .	in fl.unc.j.
" " Nigra . . .	gr.j. . . .	in fl.gr.ijj.
Pilula Hydrargyri . . .	gr.j. (subchloride) . . .	in gr.v.
"composita" Subchloridi . . .	gr.j. . . .	in gr.vj.
Suppositoria Hydrargyri . . .	gr.j. . . .	in gr.ij.
Unguentum Hydrargyri . . .	gr.j. (Hydr. Ammon.) . . .	in gr.x.
moniaci . . .	gr.j. (Hydr. Iod. Rubr.) . . .	in gr.xxviii.
Unguentum Hydrargyri Iodidi . . .	gr.j. (Hydr. Ox. Rubr.) . . .	in gr.viii.
Rubri . . .	gr.j. . . .	in gr.ivss.
Unguentum Hydrargyri Oxidi . . .	unc.j. (subchloride) . . .	in unc.vjss.
Rubri . . .		
Unguentum Hydrargyri Compositum . . .		
Unguentum Hydrargyri Subchloridi . . .		

Morphinæ Acetas.

Injectio Morphinæ Hypodermica . . .	gr.j. . . .	in min.x.
Liquor Morphinæ Acetatis . . .	gr.j. . . .	in fl.gr.c.

Morphinæ Bimeconas.

Liquor Morphinæ Bimeconatis . . .	gr.j $\frac{1}{2}$	in fl.gr.c.
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Morphinæ Hydrochloras.

Liquor Morphinæ Hydrochloratis . . .	gr.j. . . .	in fl.gr.c.
Suppositoria Morphinæ . . .	gr.ss. . . .	in each.
" " Morphinæ cum Sa- pone . . .	gr.ss. . . .	in each.
Tinctura Chloroformi et Mor- phinæ . . .	gr.j. . . .	in fl.unc.j.
Trochisci Morphinæ . . .	gr. $\frac{1}{32}$	in each.
" " et Ipecacuanhæ . . .	gr. $\frac{1}{32}$ (and gr. $\frac{1}{12}$) Ipecac.) . . .	in each.

Nux Vomica.

Tinctura Nucis Vomicae . . .	gr.j. (of alkaloids) . . .	in fl.unc.j.
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Oleum Crotonis.

Linimentum Crotonis . . .	fl.dr.j. . . .	in fl.unc.j.
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Opium.

Confectio Opii . . .	gr.j. . . .	in gr.xl.
Emplastrum Opii . . .	gr.j. . . .	in gr.x.
Enema Opii . . .	fl.dr.ss. (tincture) . . .	in fl.unc.ij.
Extractum Opii . . .	gr.j. equals about gr.ij.	
" " Liquidum . . .	gr.xxij. (extract) nearly . . .	in fl.unc.j.
Linimentum Opii . . .	fl.unc.j. (tincture) . . .	in fl.unc.ij.

Opium.

Pilula Ipecacuanhæ cum Scilla	. gr.j.	. in gr.xxiiij.
„ Plumbi cum Opio	. gr.j.	. in gr.viiij.
„ Saponis composita	. gr.j. nearly . . .	. in gr.vj.
Pulvis Cretæ Aromaticus cum Opio	} gr.j.	. in gr.xl.
Pulvis Ipecacuanhæ compositus		
„ Kino compositus	. gr.j.	. in gr.xx.
„ Opii compositus	. gr.j.	. in gr.x.
Suppositoria Plumbi composita	. gr.j.	. in each.
Tinctura Camphoræ composita	. gr.ij.	. in fl.unc.j.
„ Opii	. about gr.xxxiiij. .	. in fl.unc.j.
„ „ Ammoniata	. gr.v.	. in fl.unc.j.
Trochisci Opii	. gr. $\frac{1}{10}$ (extract) . .	. in each.
Unguentum Gallæ cum Opio	. gr.xxxij.	. in unc.j.
Vinum Opii	. nearly gr.xxij. . .	. in fl.unc.j.

Strychnina.

Liquor Strychninæ Hydrochloratis	} gr.j.	. in fl.gr.c.
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APPENDIX.

No. V.

Symbols and Atomic Weights of the Elementary Bodies mentioned in the British Pharmacopœia.

ELEMENTARY BODIES.	SYMBOLS AND ATOMIC WEIGHTS.	
	New System.	
Aluminium	Al	= 27
Antimony (Stibium)	Sb	= 120
Arsenium	As	= 75
Barium	Ba	= 137
Bismuth	Bi	= 209
Boron	B	= 11
Bromine	Br	= 80
Calcium	Ca	= 40
Carbon	C	= 12
Cerium	Ce	= 141
Chlorine	Cl	= 35·5
Chromium	Cr	= 52·5
Copper (Cuprum)	Cu	= 63·4
Gold (Aurum)	Au	= 196·5
Hydrogen	H	= 1
Iodine	I	= 127
Iron (Ferrum)	Fe	= 56
Lead (Plumbum)	Pb	= 207
Lithium	L	= 7
Magnesium	Mg	= 24
Manganese	Mn	= 55
Mercury (Hydrargyrum)	Hg	= 200
Nitrogen	N	= 14
Oxygen	O	= 16
Phosphorus	P	= 31
Platinum	Pt	= 195
Potassium (Kalium)	K	= 39
Silver (Argentum)	Ag	= 108
Sodium (Natrium)	Na	= 23
Sulphur	S	= 32
Tin (Stannum)	Sn	= 118
Zinc	Zn	= 65

APPENDIX.

No. VI.

WEIGHTS AND MEASURES.

WEIGHTS.

1 Pound	lb.	=	16 ounces	=	7000 grains.
1 Ounce	oz.	=		=	437·5 grains.
1 Grain	gr.	=		=	1 grain.

MEASURES.

1 Gallon	C.	=	8 pints	Ovij.
1 Pint	O.	=	20 fluid ounces	fl.unc.xx.
1 Fluid Ounce	fl.unc.	=	8 fluid drachms.	fl.dr.vij.
1 Fluid Drachm	fl.dr.	=	60 minims . . .	min.lx.
Minim	min.	=	1 minim . . .	min.j.

MEASURES OF LENGTH.

1 Inch	=	in.		
12 Inches	=	1 foot.		
36 Inches	=	3 feet	=	1 yard.

RELATION OF MEASURES TO WEIGHTS.

1 Minim is the measure of	.	.	.	.	0·91 grs. of water
1 Fluid Drachm	"	.	.	.	54·68 "
1 Fluid Ounce	"	1 ounce, or	.	437·5	"
1 Pint	"	1·25 pounds, or	.	8750·0	"
1 Gallon	"	10 pounds, or	.	70,000·0	"

WEIGHTS AND MEASURES OF THE METRIC SYSTEM.

WEIGHTS.

1 Milligramme	=	the thousandth part of 1 grm. or	0·001 grm.	
1 Centigramme	=	the hundredth	"	0·01 "
1 Decigramme	=	the tenth	"	0·1 "
1 Gramme	=	weight of a cubic centimetre of water at 4° C.	or	1·0 "
1 Dekagramme	=	ten grammes	"	10·0 "
1 Hectogramme	=	one hundred grammes	"	100·0 "
1 Kilogramme	=	one thousand grammes	"	1000·0 "

MEASURES OF CAPACITY.

1 Millilitre	=	1 cubic centim. or the mea. of 1 grm. of water		
1 Centilitre	=	10	10	" "
1 Decilitre	=	100	100	" "
1 Litre	=	1000	1000	" (1 kilo.)

MEASURES OF LENGTH.

1 Millimetre	=	the thousandth part of one metre, or	0.001	metre
1 Centimetre	=	the hundredth	0.01	"
1 Decimetre	=	the tenth part	0.1	"
1 Metre			1.0	"

RELATION OF THE WEIGHTS OF THE BRITISH PHARMACOPŒIA TO THE METRIC WEIGHTS.

1 Pound	=	453.5927 grammes
1 Ounce	=	28.3495 "
1 Grain	=	0.0648 "

RELATION OF MEASURES OF CAPACITY OF THE BRITISH PHARMACOPŒIA TO THE METRIC MEASURES.

1 Gallon	=	4.543458 litres	
1 Pint	=	0.567932 "	or 567.932 cubic centimetres
1 Fluid Ounce	=	0.028397 "	28.397 "
1 Fluid Drachm	=	0.003550 "	3.550 "
1 Minim	=	0.000059 "	0.059 "

RELATION OF THE METRIC WEIGHTS TO THE WEIGHTS OF THE BRITISH PHARMACOPŒIA.

1 Milligramme	=	0.015432 grs.
1 Centigramme	=	0.15432 "
1 Decigramme	=	1.5432 "
1 Gramme	=	15.432 "
1 Kilogramme	=	2 lbs. 3 oz. 119.8 grs. or = 15432.349 "

RELATION OF THE METRIC MEASURES TO THE MEASURES OF THE BRITISH PHARMACOPŒIA.

1 Millimetre	=	0.03937 inches
1 Centimetre	=	0.39371 "
1 Decimetre	=	3.93708 "
1 Metre	=	39.37079 " or 1 yard 3.37 inches
1 Cubic Centimetre	=	15.432 grain measures
1 Litre	=	1.76077 pint or 1 pint 15 oz. 1 dr. 43 m.

APPENDIX.

No. VII.

TABLE of the more celebrated Mineral Waters, showing the Principal Ingredients contained in each Water.

NAMES OF THE SPRINGS	Quantity of Water	GASES				CARBONATES OR BICARBONATES OF				SULPHATES OF				CHLORIDES OF				Sulph. of Sodium	Temperature Fahr.
		Oxygen	Carb. Acid	Sulph. Hydr.	Nitrogen	Sodium	Calcium	Magnesium	Iron	Sodium	Calcium	Magnesium	Iron	Sodium	Calcium	Magnesium	Potassium		
{Kissingen Neuenahr Tarasp Wiesbaden	Grs.	Cub. In.	Cub. In.	Cub. In.	Cub. In.	Grs.	Grs.	Grs.	Grs.	Grs.	Grs.	Grs.	Grs.	Grs.	Grs.	Grs.	Grs.	Grs.	
	7680	..	41.77	..	..	5.99	8.14	1.77	.24	..	2.99	4.50	..	44.71	..	2.33	2.20	.09	
	7680	..	24.73	..	..	27.22	1.68	5.07	.15	58	..	..	..	71	..	..	..	.17	
	7680	..	34.8 grs.	..	..	..	12.43	5.07	.04	16.54	..	..	..	29.40	..	..	..	.24	
{Contrexéville Ems Royat Schlangenbad Vals Vichy Wildungen	1000	..	..	..	..	..	5.12	.08	..	..	.69	..	..	52.50	3.62	1.57	1.12	.46	
	7680	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	7680	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	7680	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
{Pymont St. Moritz Schwalbach Spa..	7680	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	7680	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	7680	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	7680	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	

TABLE of the more celebrated Mineral Waters, showing the Principal Ingredients contained in each Water—*continued*.

NAMES OF THE SPRINGS	Quantity of Water	GASES				CARBONATES OR BICARBONATES OF				SULPHATES OF				CHLORIDES OF				Silica	Sulph. of Sodium	Temperature
		Oxygen	Carbonic Acid	Sulph. Hydr.	Nitrogen	Sodium	Calcium	Magnesium	Iron	Sodium	Calcium	Magnesium	Iron	Sodium	Calcium	Magnesium	Potassium			
	<i>Cub. In.</i>	<i>Cub. In.</i>	<i>Cub. In.</i>	<i>Cub. In.</i>	<i>Cub. In.</i>	<i>Grs.</i>	<i>Grs.</i>	<i>Grs.</i>	<i>Grs.</i>	<i>Grs.</i>	<i>Grs.</i>	<i>Grs.</i>	<i>Grs.</i>	<i>Grs.</i>	<i>Grs.</i>	<i>Grs.</i>	<i>Grs.</i>	<i>Grs.</i>	<i>Grs.</i>	
Carlsbad	7680	7.50	45.107	..	..	9.06	2.01	1.19	.376	19.96	..	..	..	8.72	..	..	..	1.05	..	1620
Franzensbad	7680	..	48.64	..	..	..	10.99	2.01	.46	25.22	..	..	..	9.34	..	..	..	.056	..	510
Homburg	7680	..	7.42	..	..	..	6.63	5.39	.482	.38	..	..	..	79.15	..	7.79	..	.32	..	500
Marienbad	7680	..	..	..	..	12.39	1.217	3.95	.073	36.26	..	..	..	11.166	..	..	..	.079	..	53.30
Aix-la-Chapelle	7680	1.23 per cent.	89.4 per cent.	..	9.00 per cent.	4.99	1.14	..	.068	2.171	..	..	..	20.27	..	..	..	.508	.073	1310
Aix-les-Bains ..	7680	..	.025 vol.	.041 vol.	.032 vol.	..	..	..	..	.737	.122	.270	.420	.061	..	.132	..	.038	..	1060
Barèges	7680	..	..	..	.004	.039	.022	.026	..	.384	..	..	..	.307	..	..	..	.519	.360	{ 880-1110
Harrogate	70000	..	22.00	5.31	2.91	..	12.37	..	..	..	.13	..	..	860.1	81.74	55.69	64.7	.25	15.48	—









